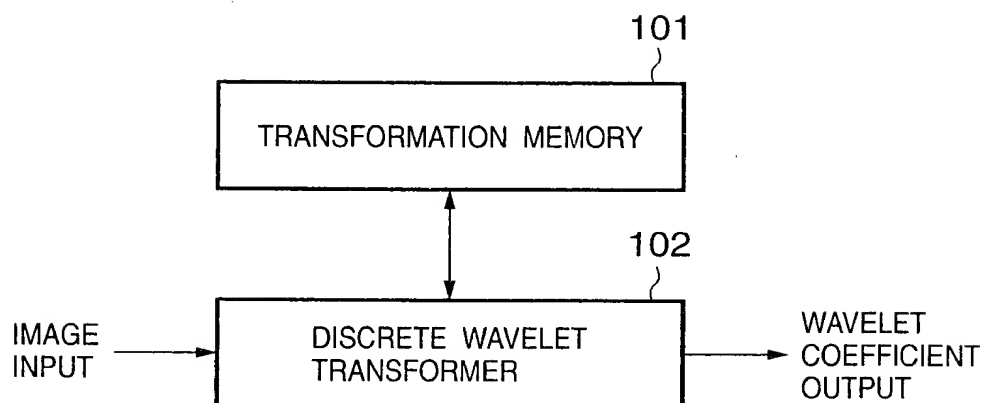


FIG. 1



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FIG. 2A

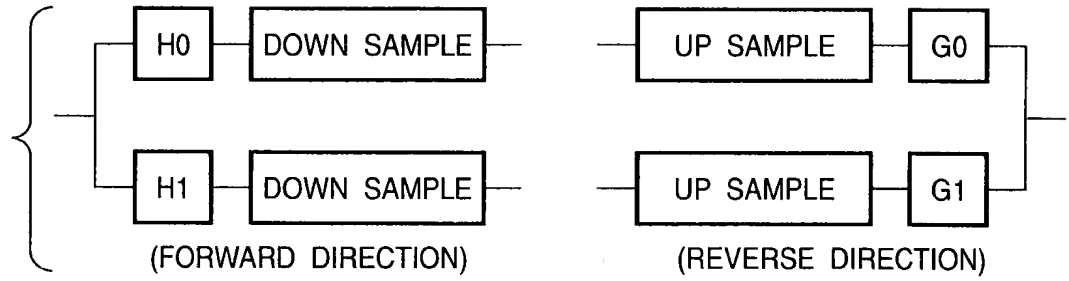


FIG. 2B

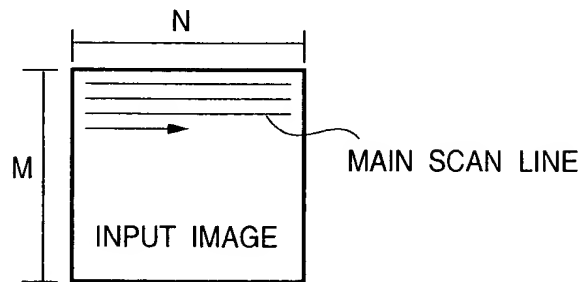


FIG. 2C

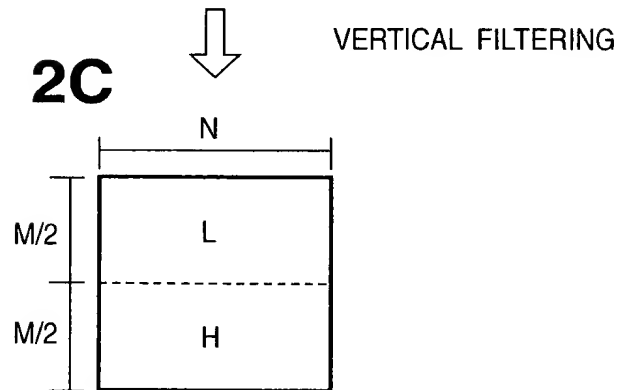


FIG. 2D

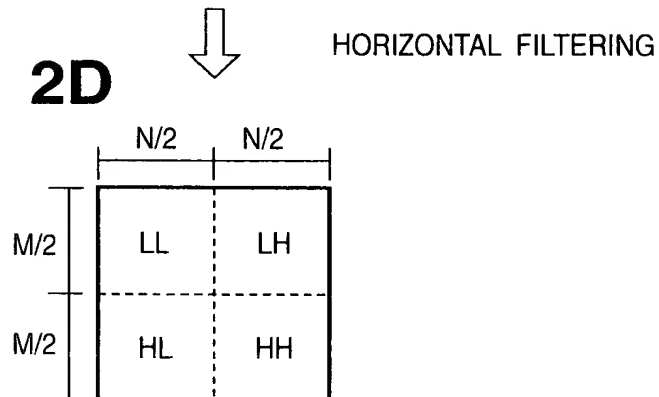
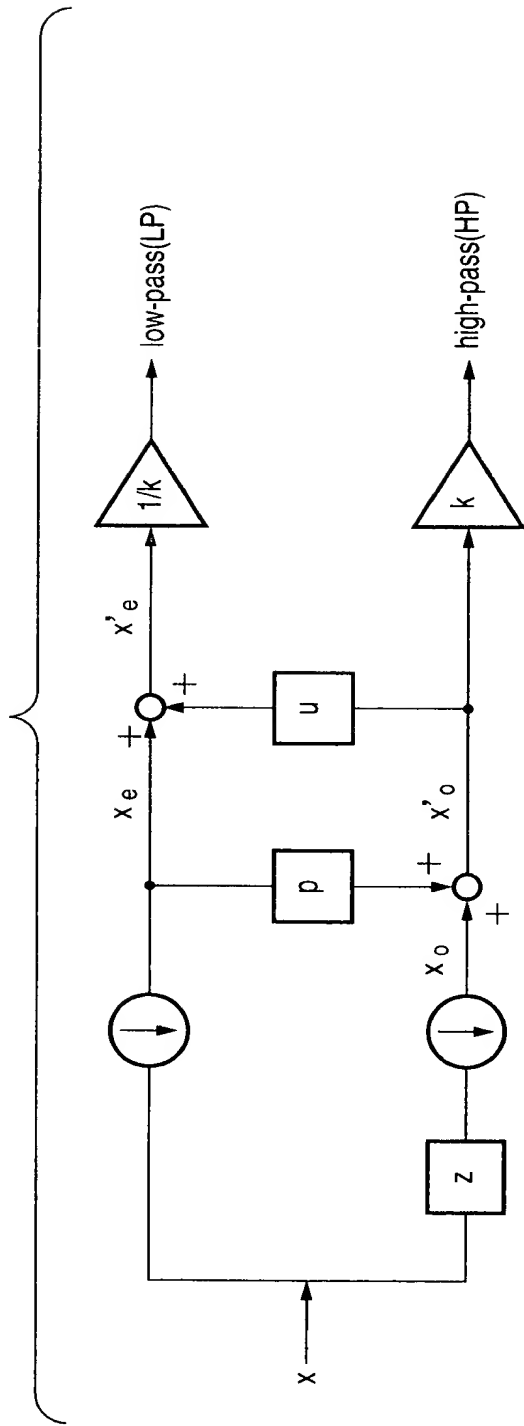


FIG. 3



$$X = (x_0, x_1, x_2, x_3, x_4, \dots)$$

$$X_e = (x_0, x_2, x_4, \dots)$$

$$X_o = (x_1, x_3, x_5, \dots)$$

$$X'_o = X_o + pX_e$$

$$X'_e = X_e + uX'_o$$

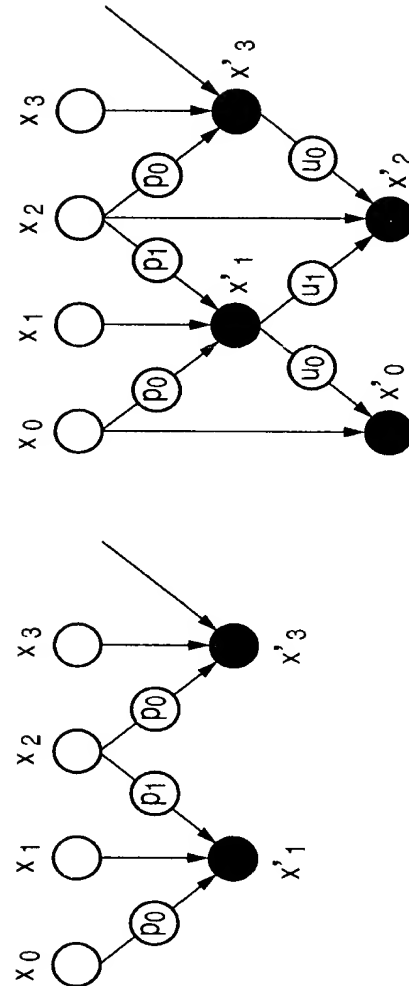
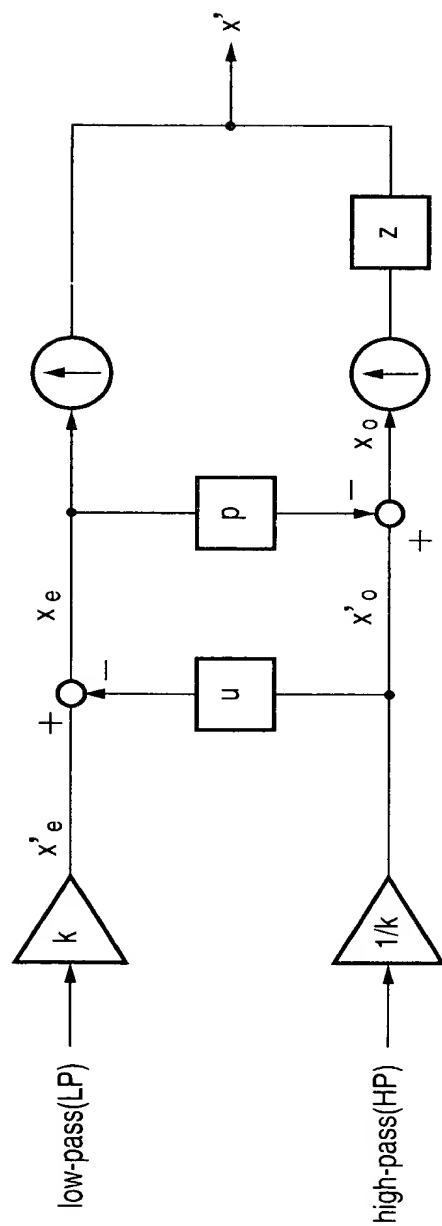
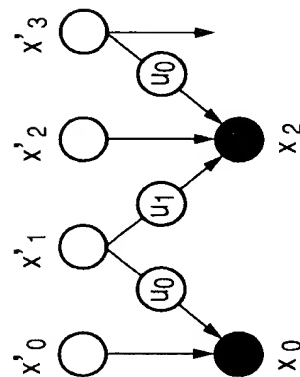


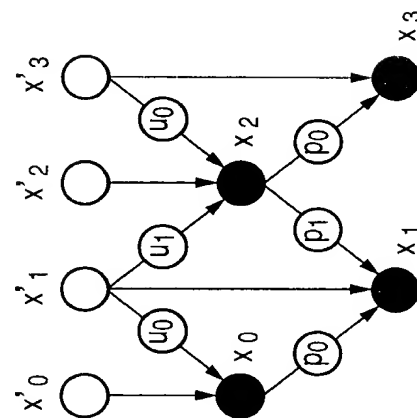
FIG. 4



$$X_e = X'_e - uX'_0$$



$$X_o = X'_o - pX'_e$$



$$X_e = (x_0, x_2, x_4, \dots)$$

$$X_o = (x_1, x_3, x_5, \dots)$$



$$X = (x_0, x_1, x_2, x_3, x_4, \dots)$$

FIG. 5

Filter	Filter coefficients	
	FORWARD DIRECTION	REVERSE DIRECTION
5×3 filter	$H0 = [-1, 2, 6, 2, -1] / 8$ $H1 = [-1, 2, -1] / 2$	$G0 = [1, 2, 1] / 2$ $G1 = [-1, -2, 6, -2, -1] / 8$

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FIG. 6

Filter	Lifting coefficients	
	FORWARD DIRECTION	REVERSE DIRECTION
5×3 filter	$\begin{aligned} p &= (-1, -1) / 2 \\ u &= (1, 1) / 4 \end{aligned}$	$\begin{aligned} p &= (-1, -1) / 2 \\ u &= (1, 1) / 4 \end{aligned}$

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FIG. 7

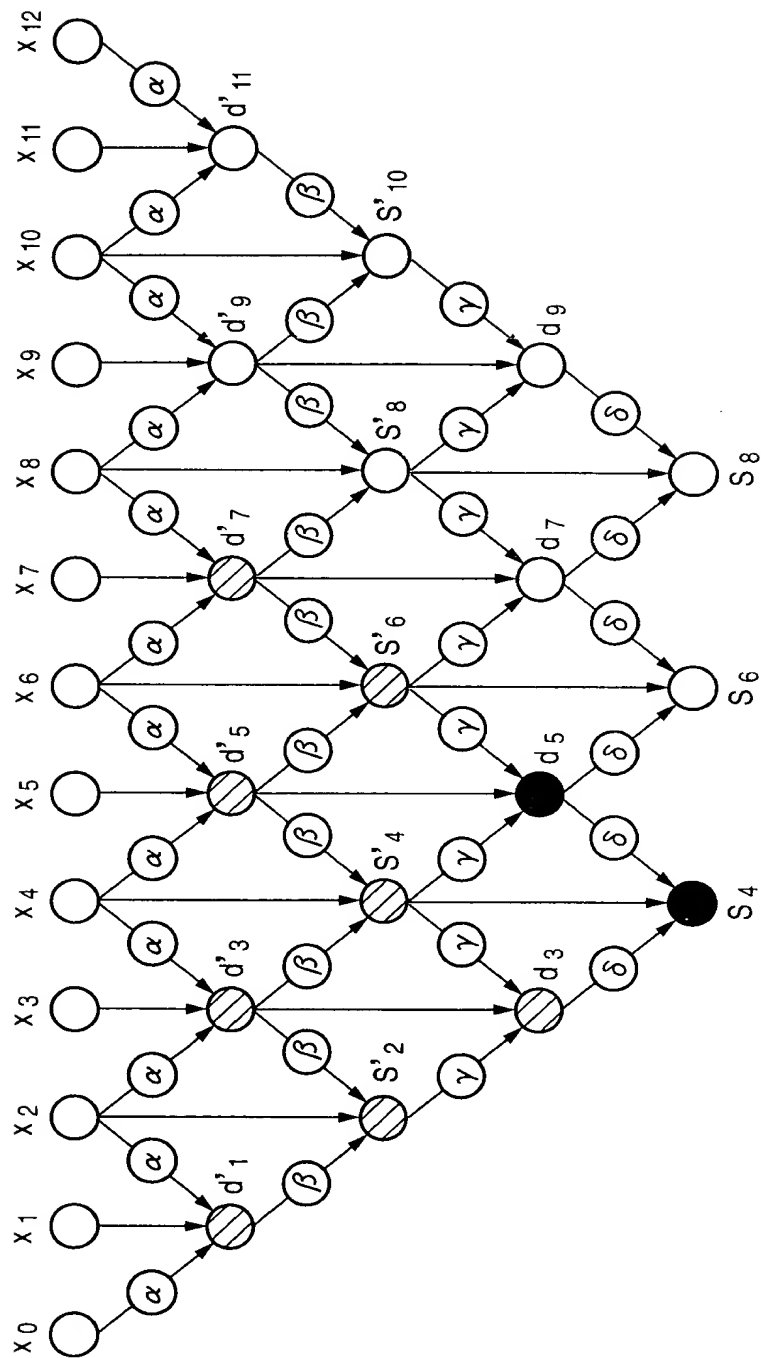


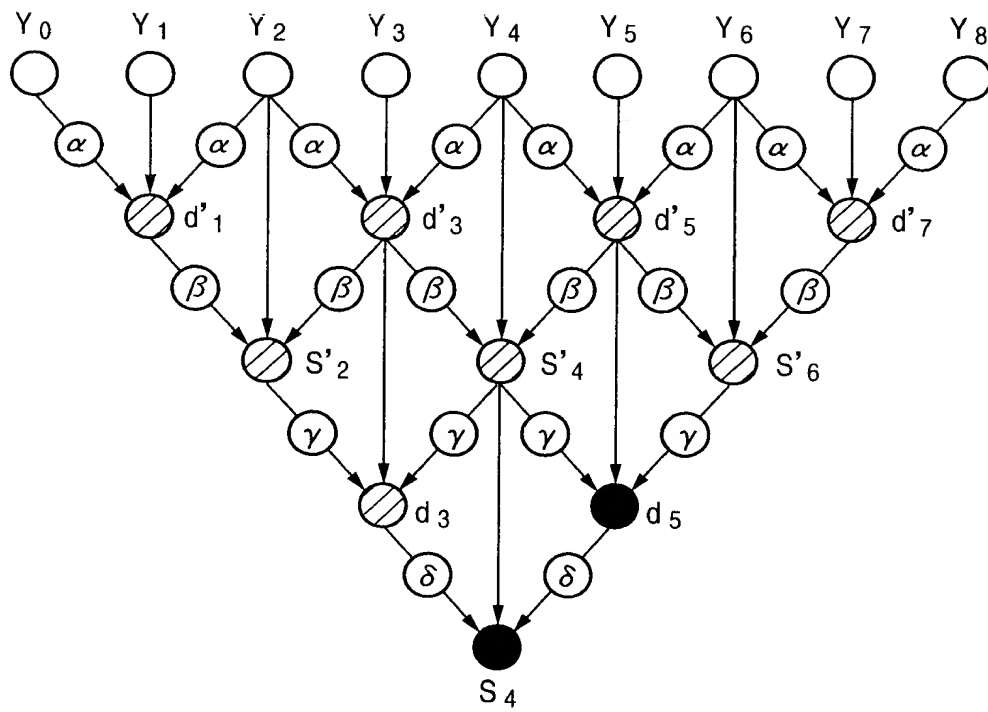
FIG. 8

FIG. 9

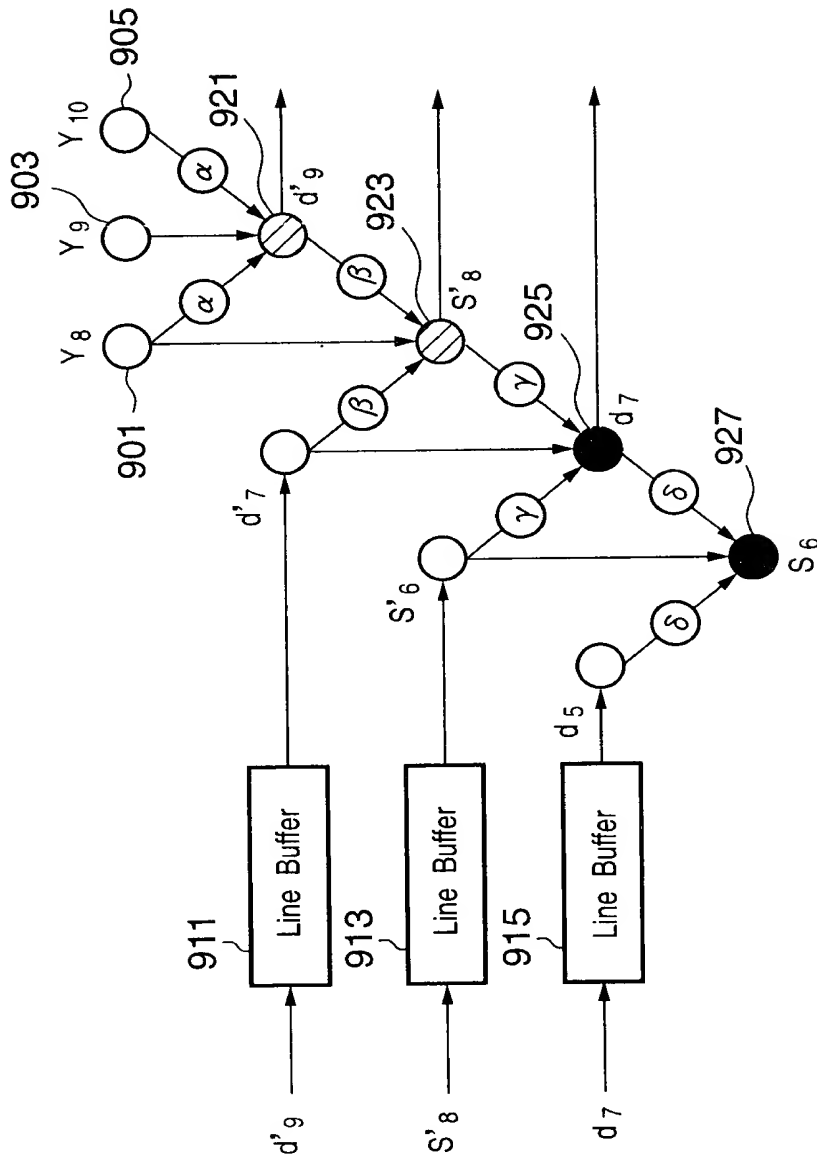


FIG. 10

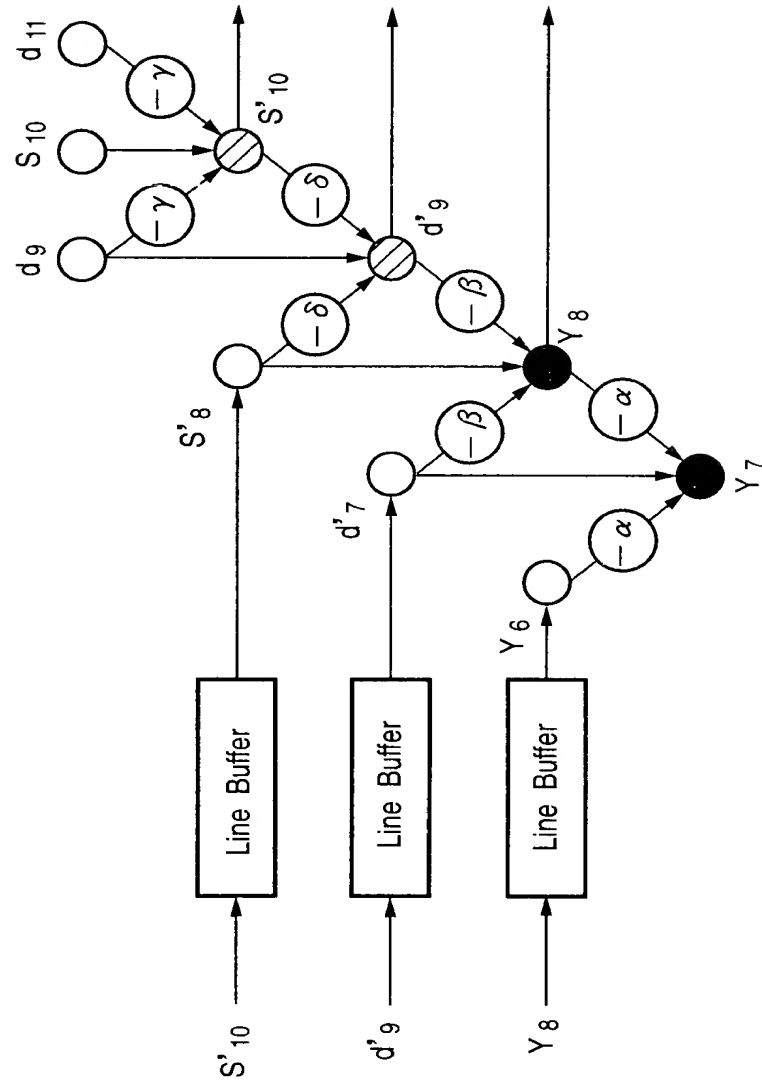
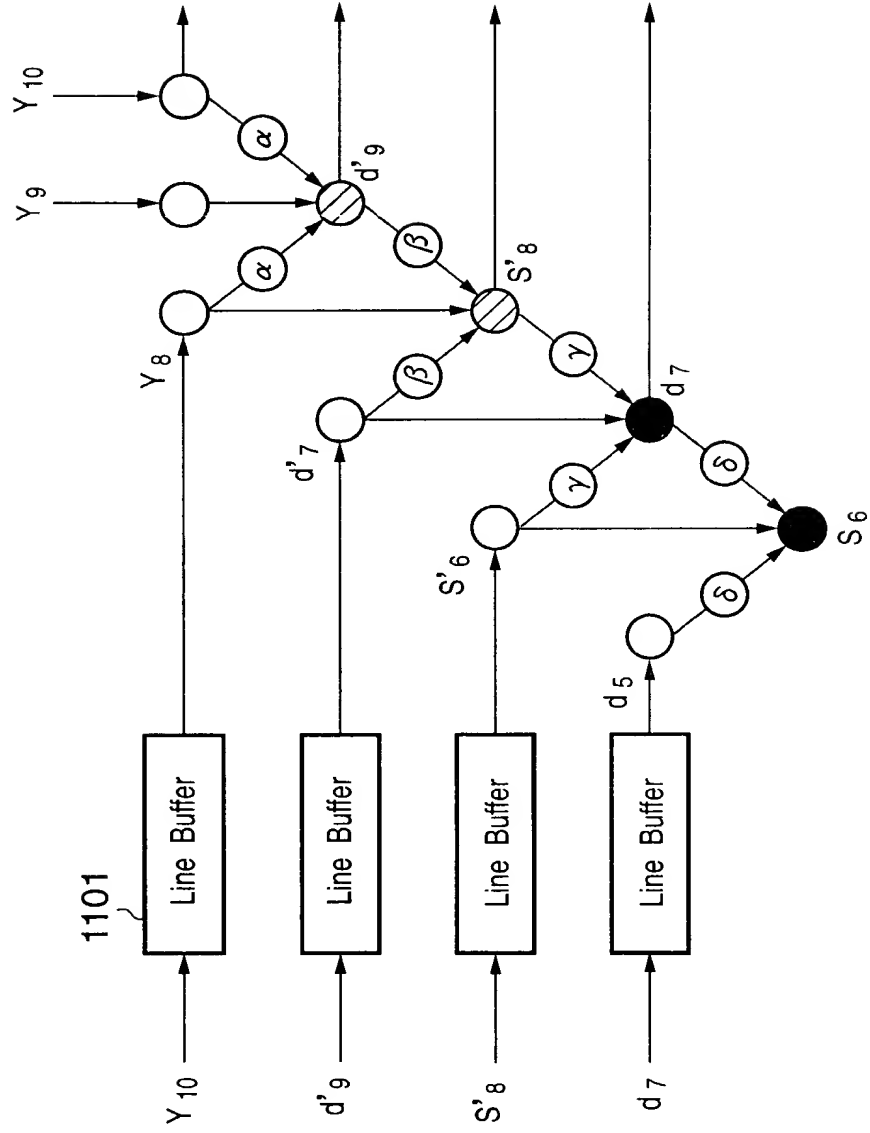


FIG. 11



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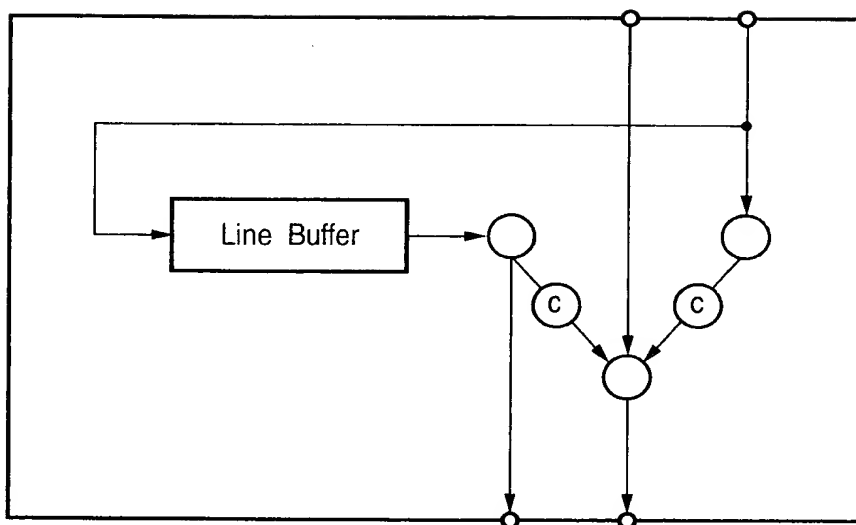


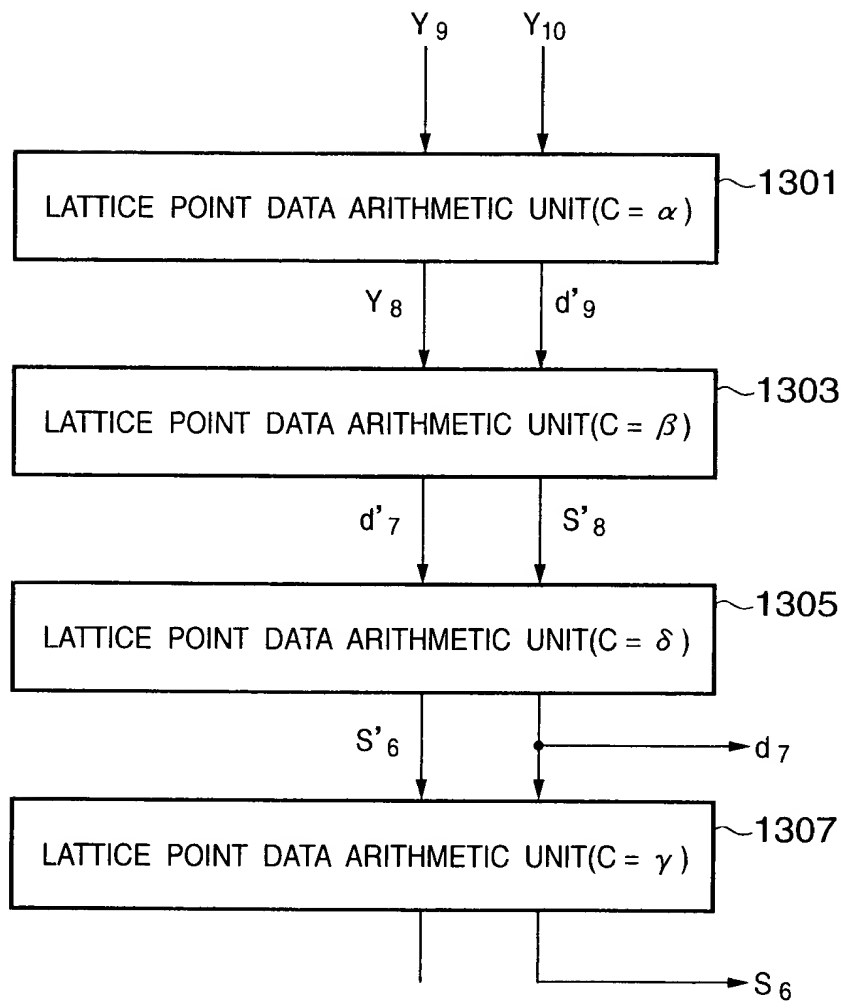
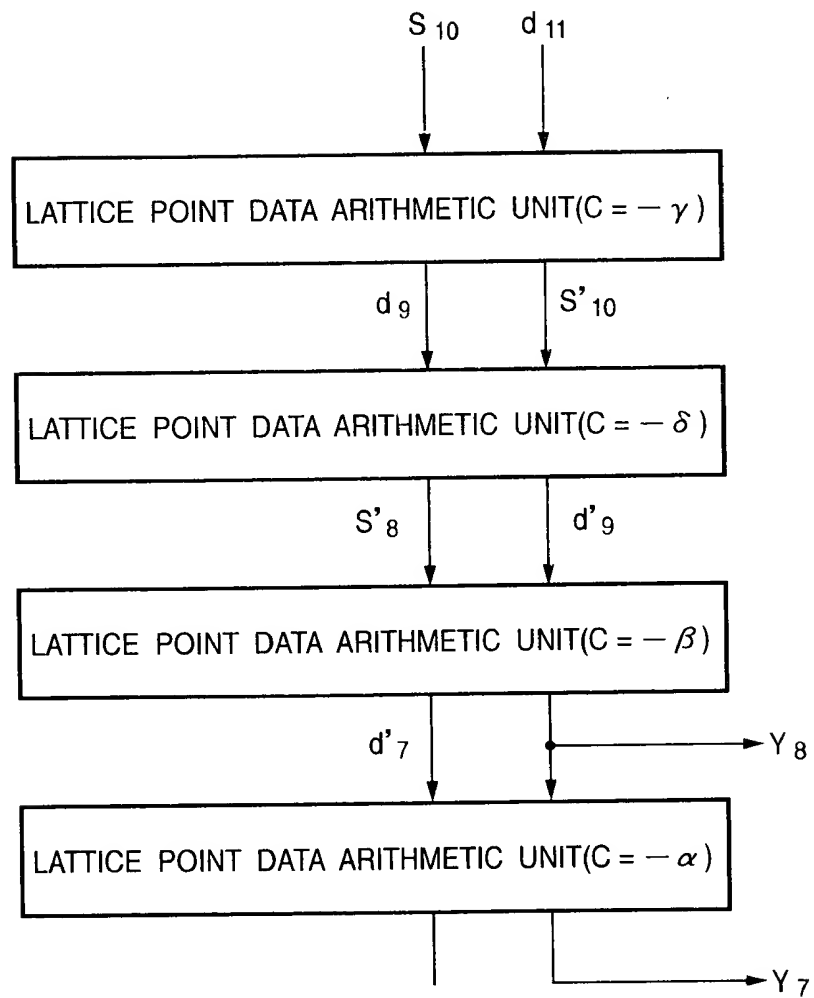
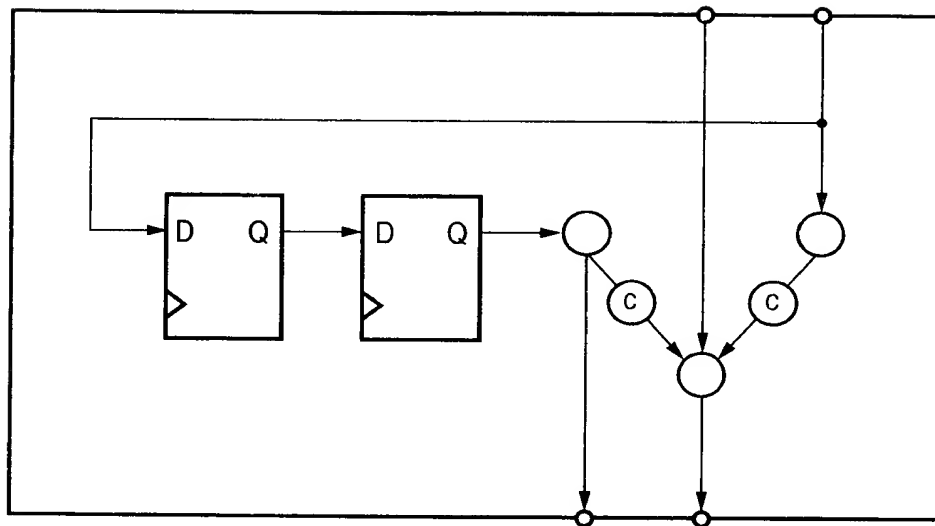
FIG. 13

FIG. 14



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FIG. 15



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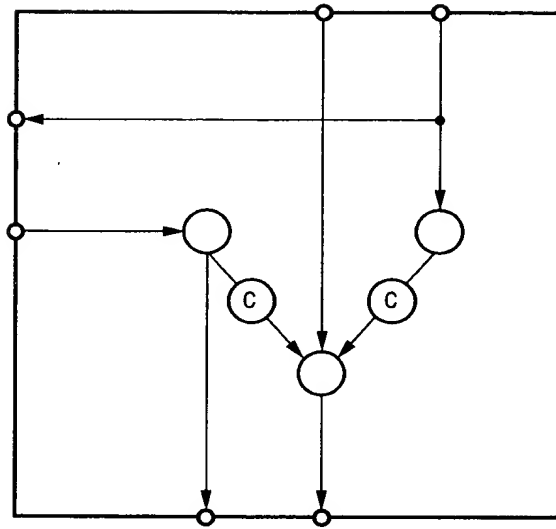
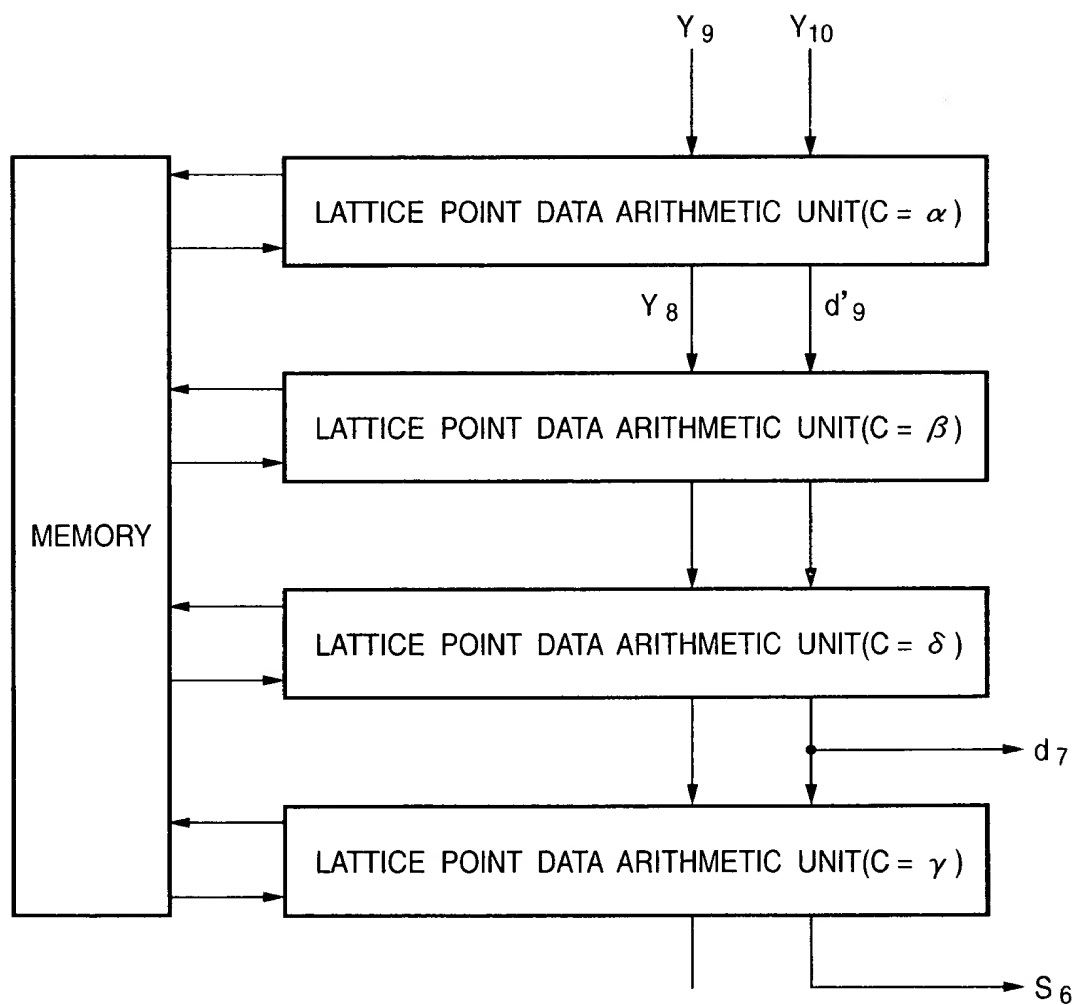


FIG. 17



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FIG. 18

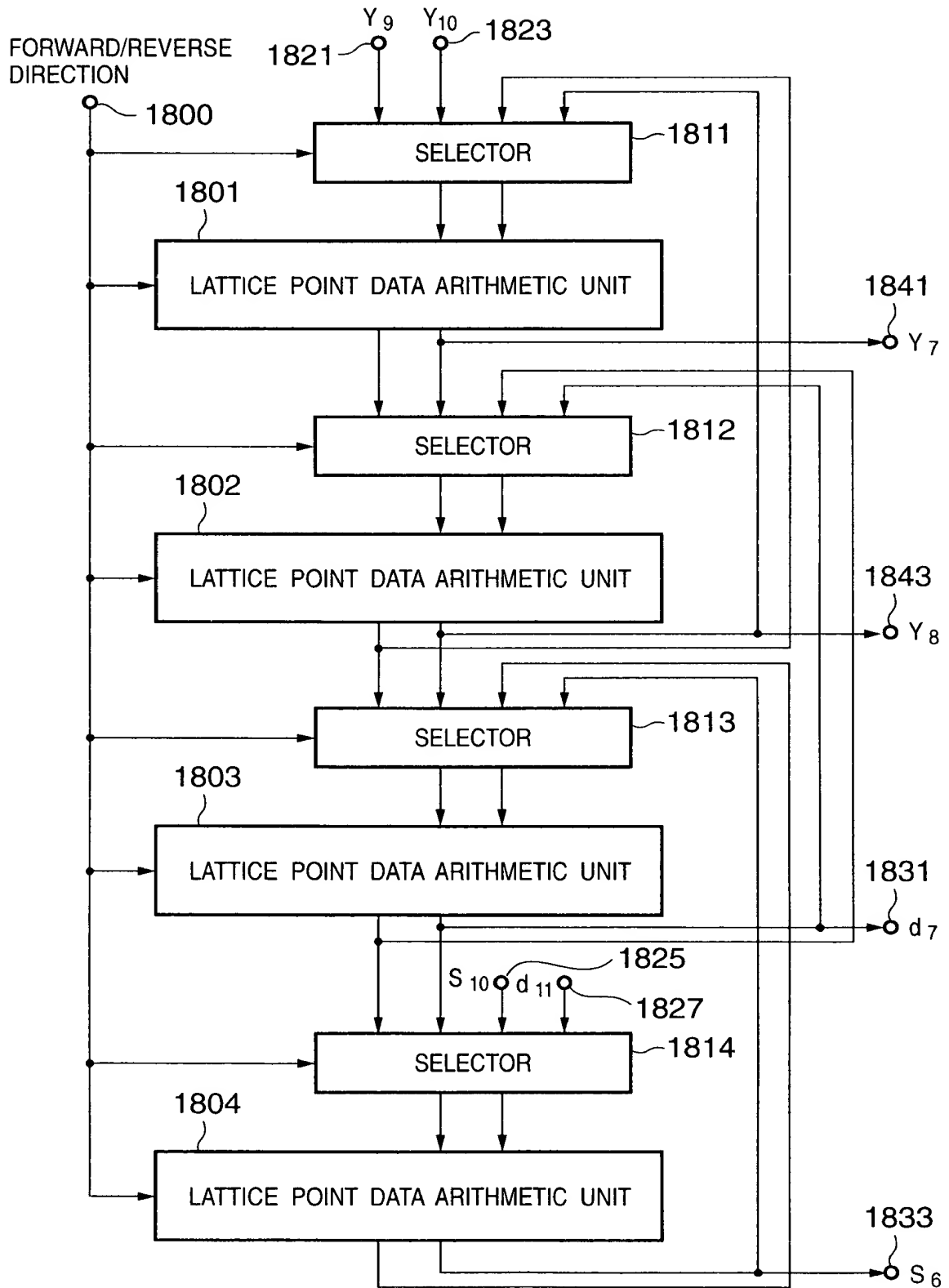
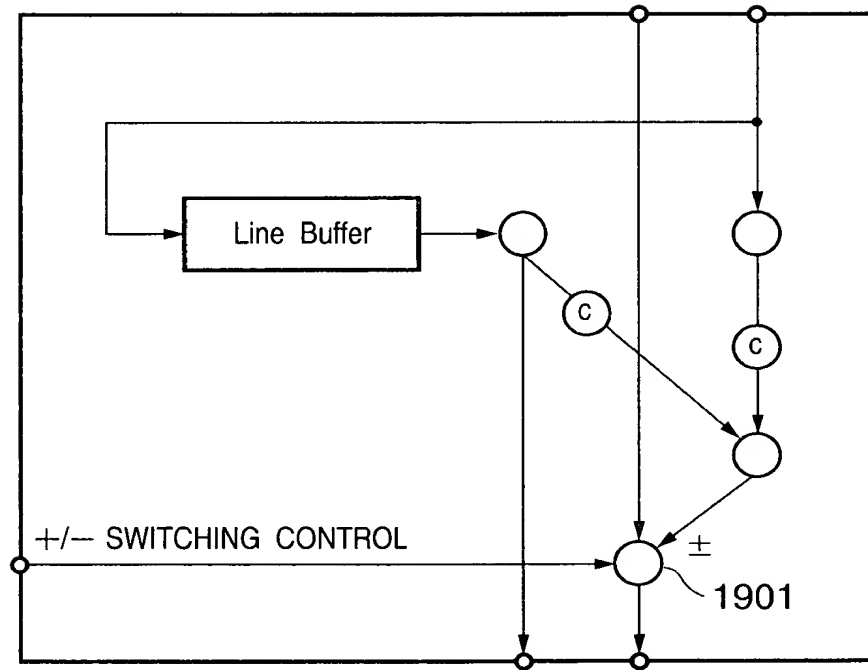
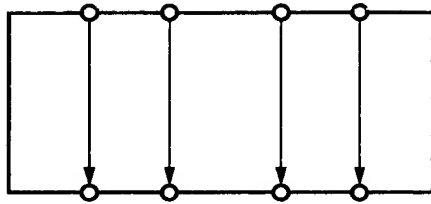


FIG. 19



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F I G. 20A



F I G. 20B

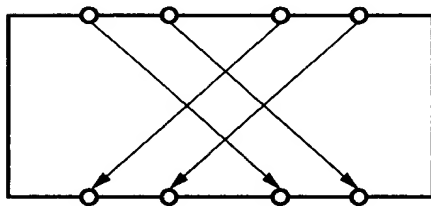


FIG. 21

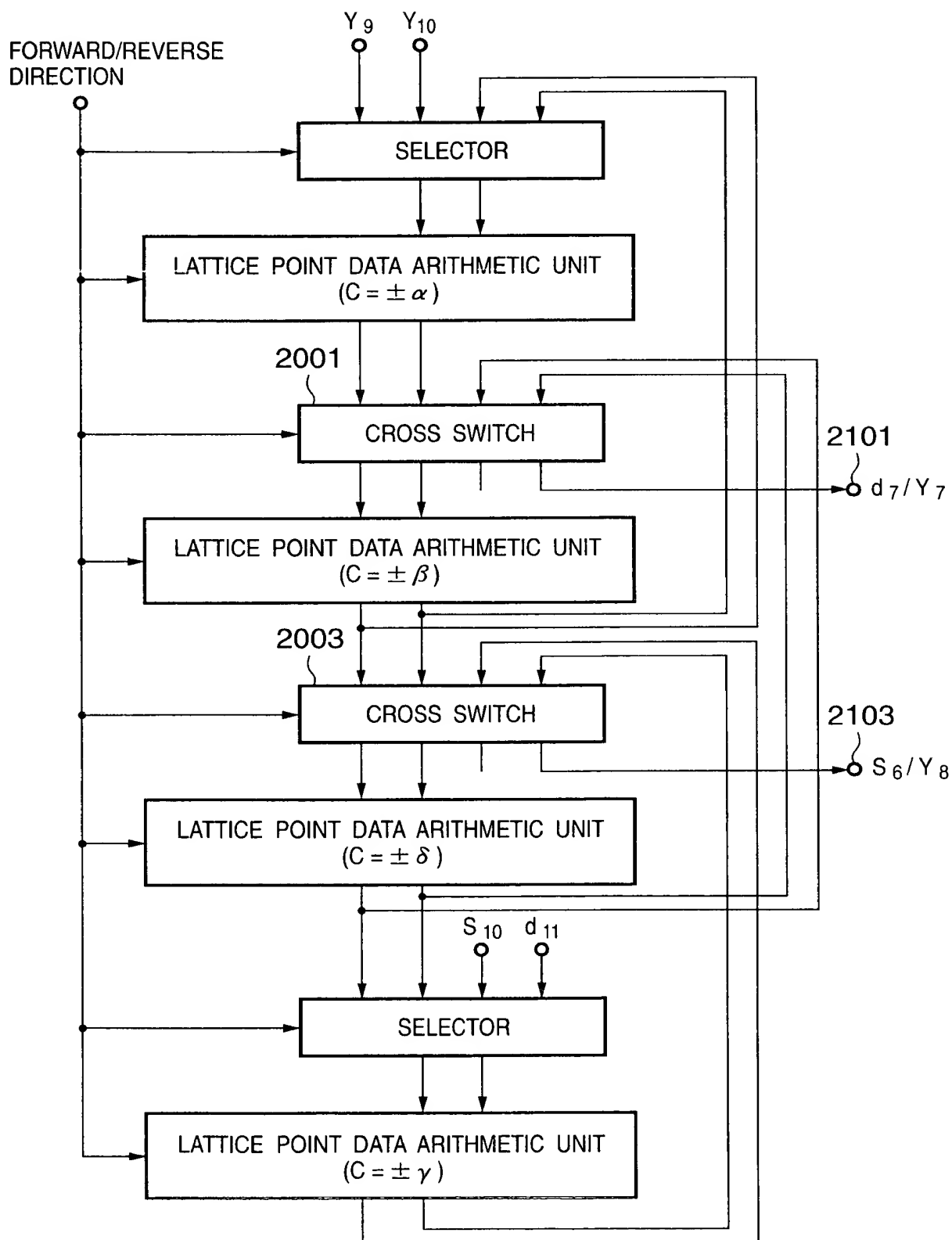
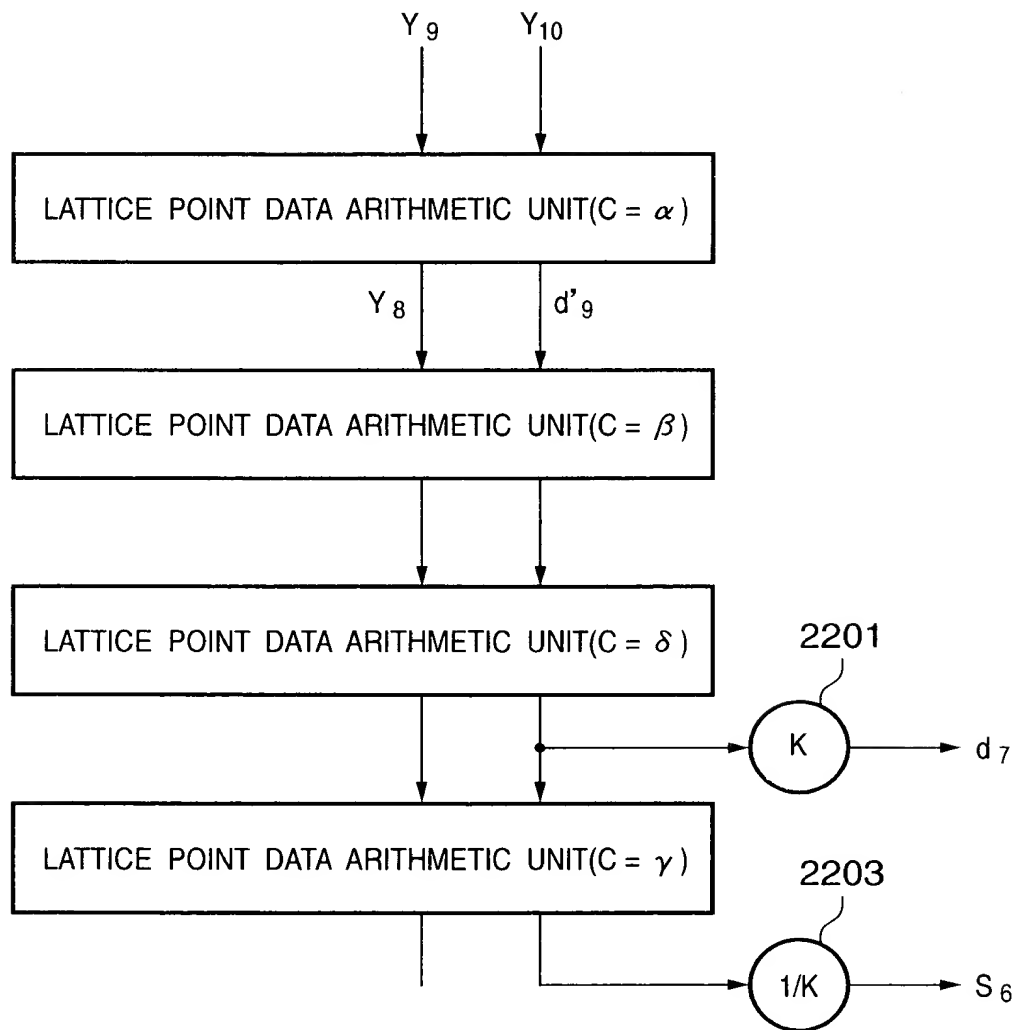


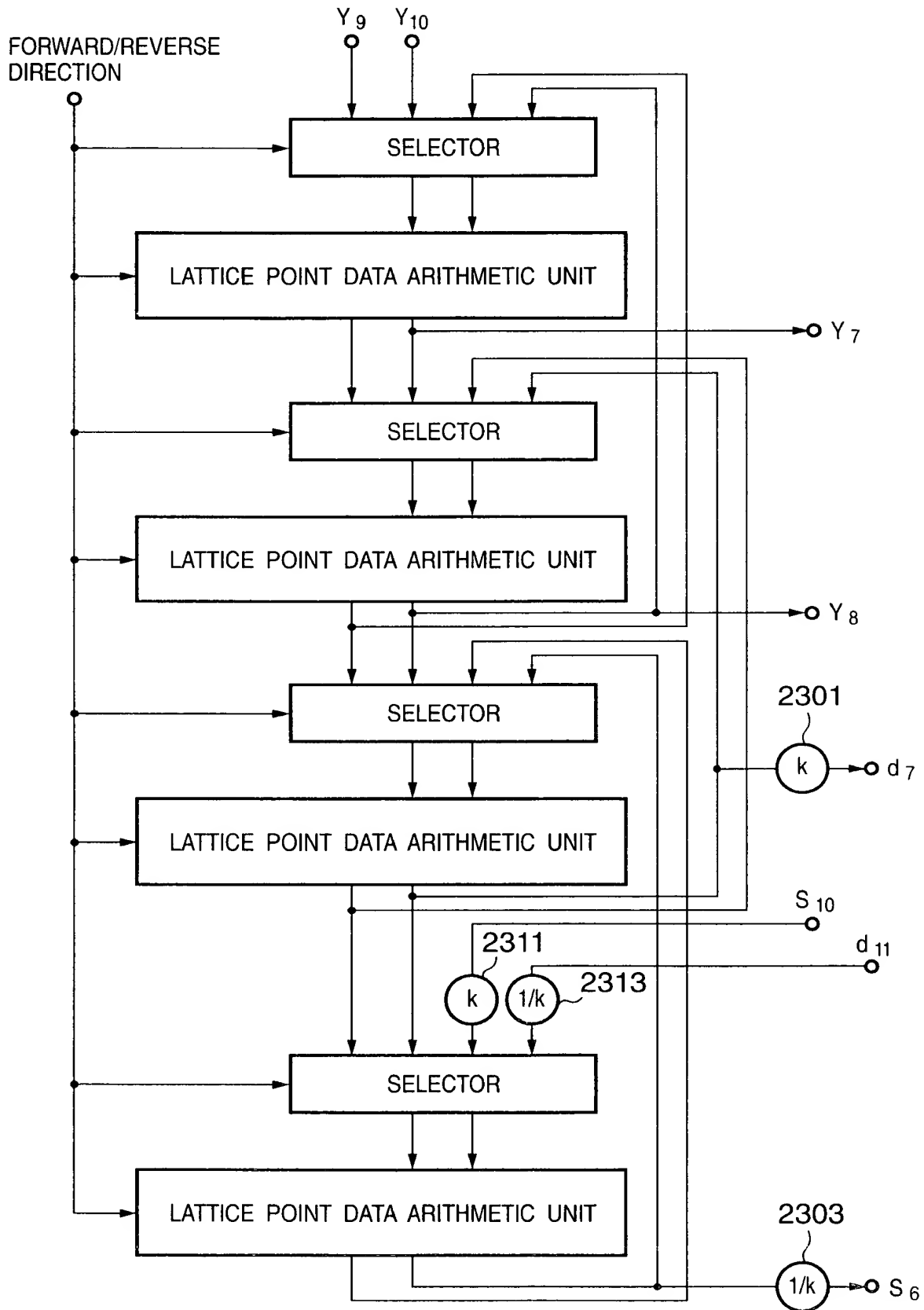
FIG. 22



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FIG. 23

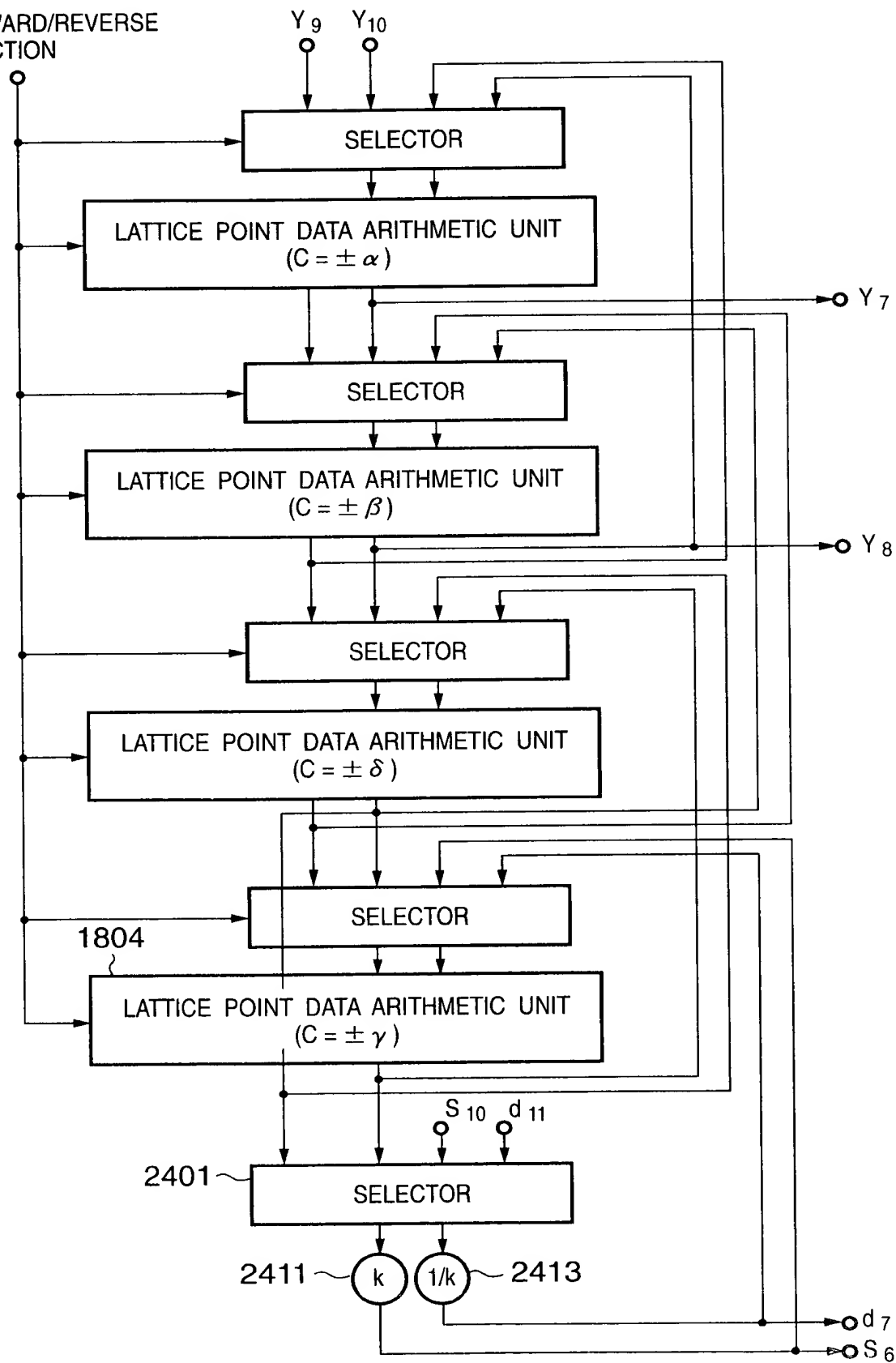


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FIG. 24

FORWARD/REVERSE
DIRECTION



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FIG. 25

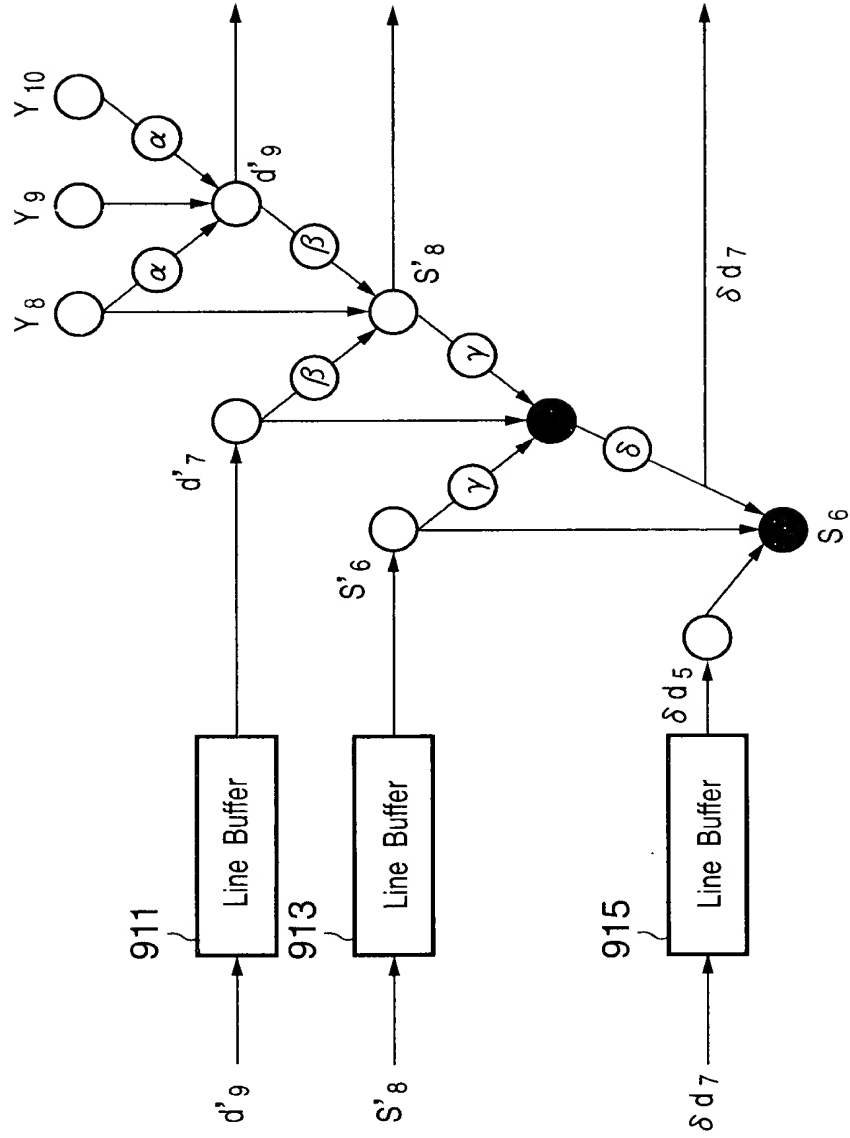


FIG. 26

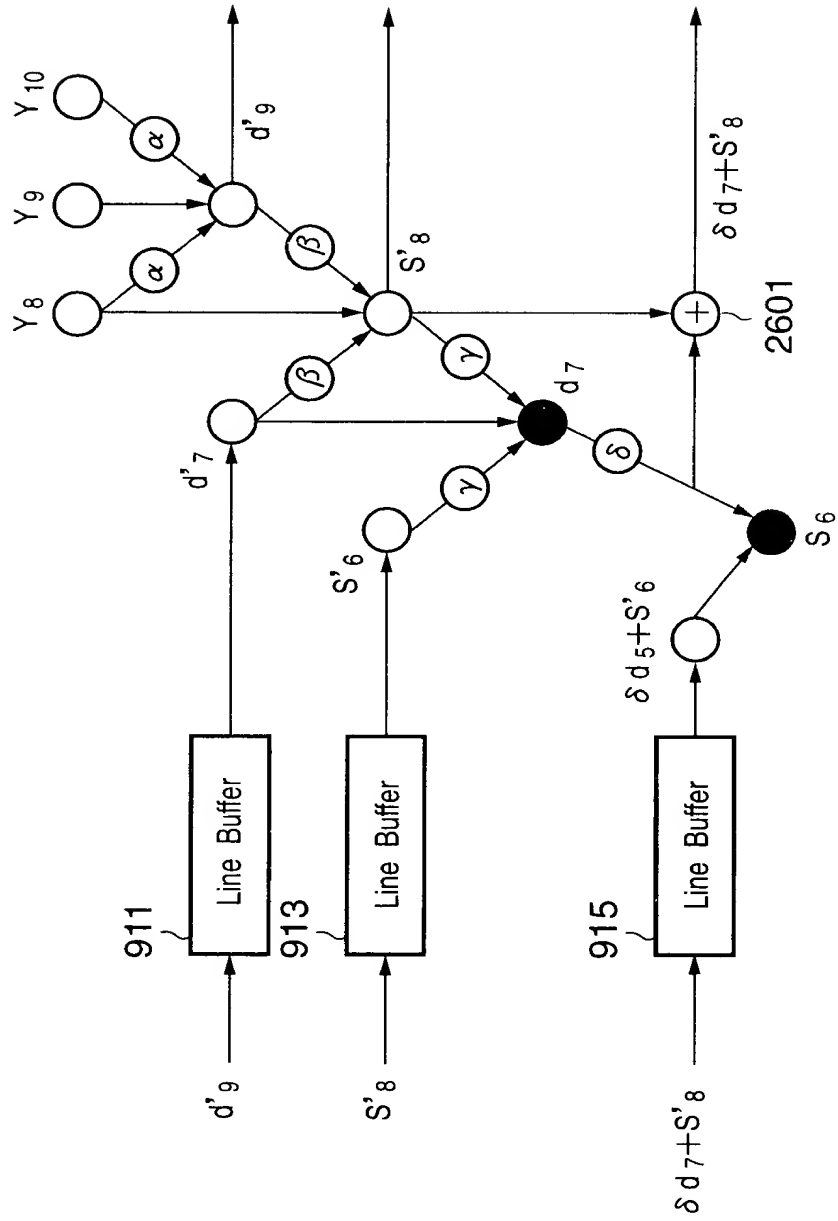


FIG. 27

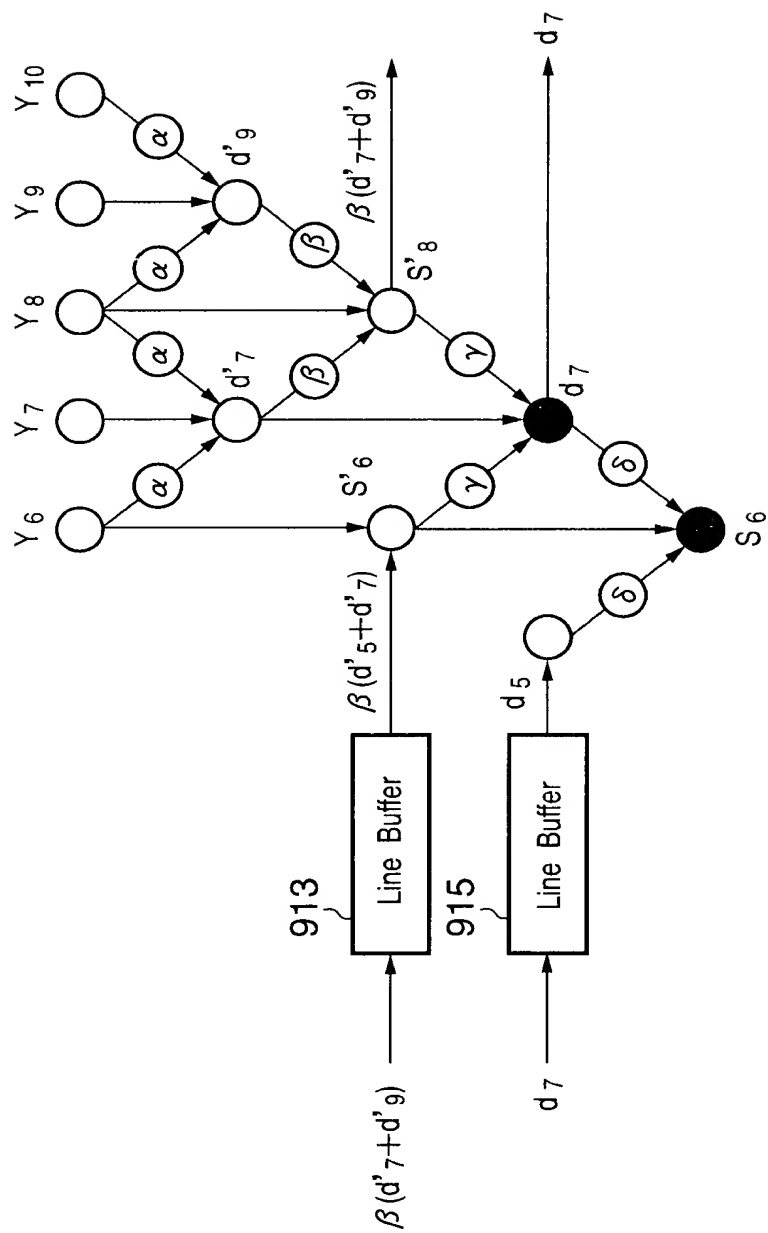


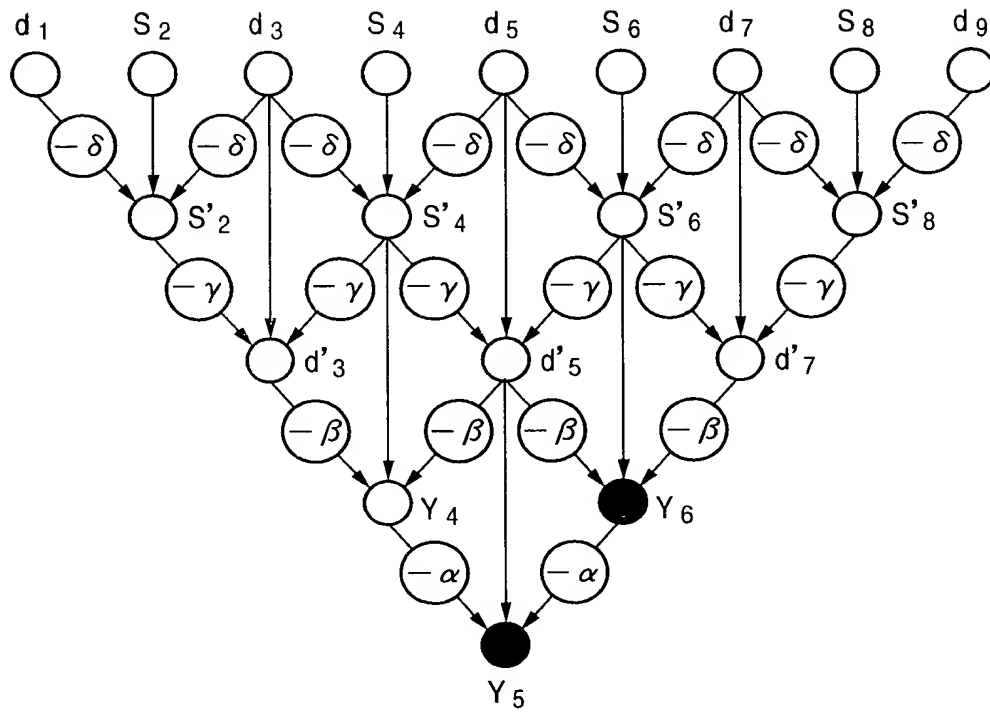
FIG. 28

FIG. 29

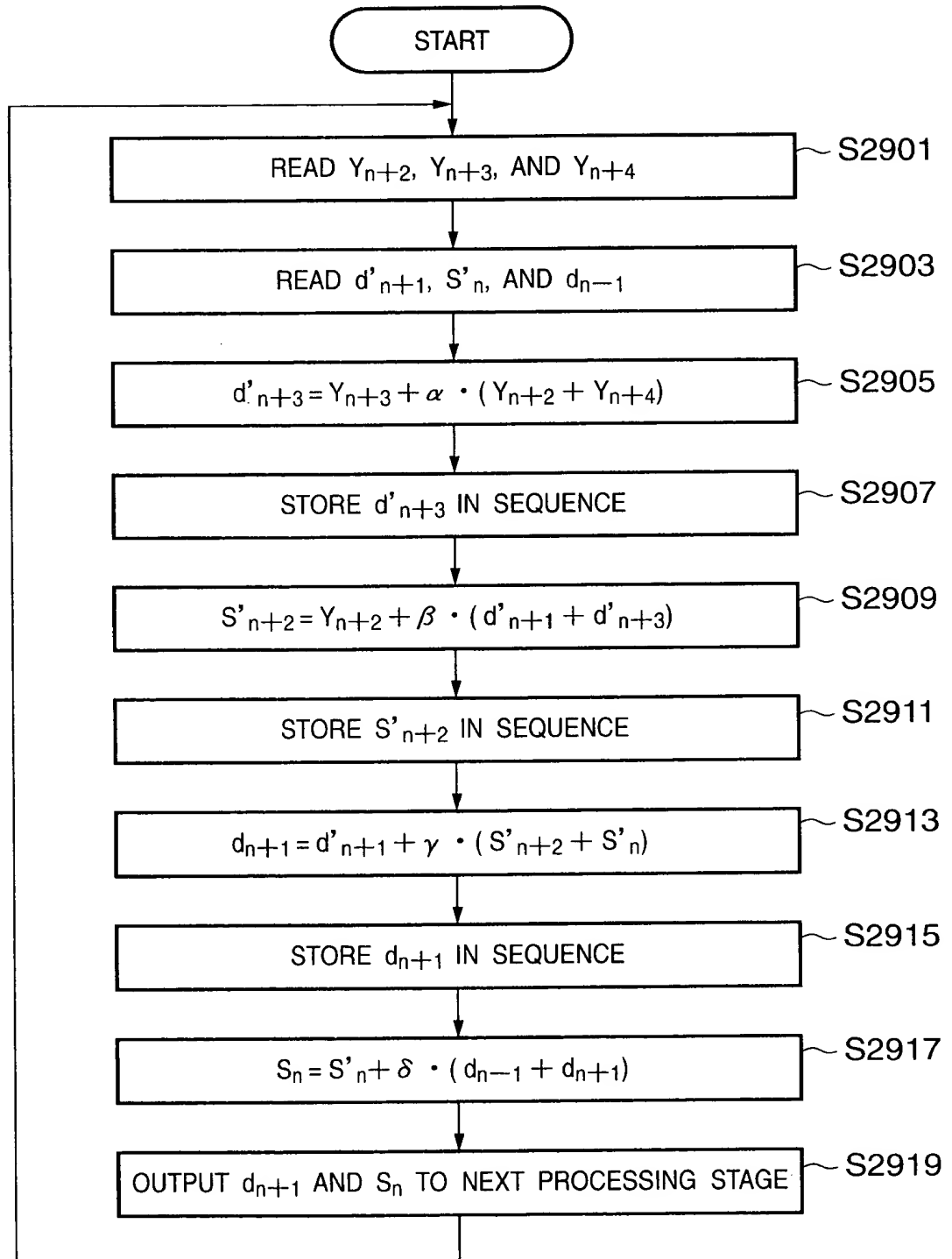
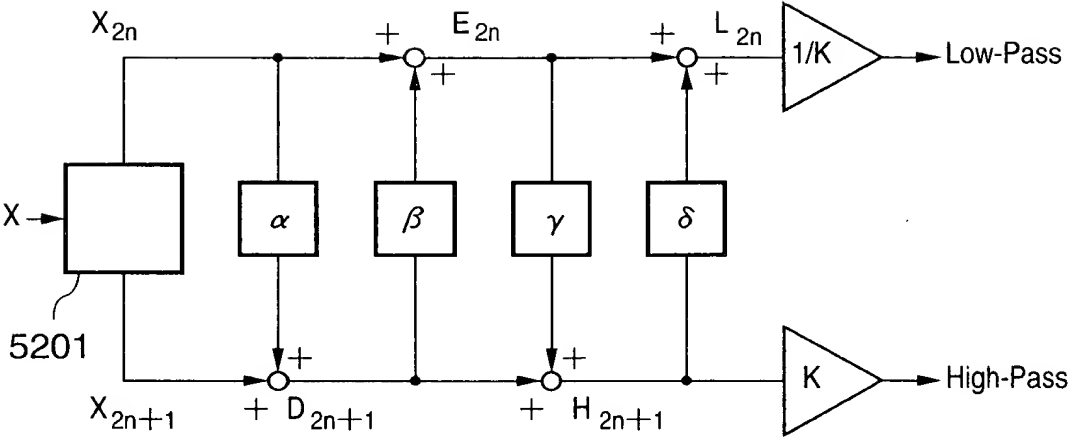
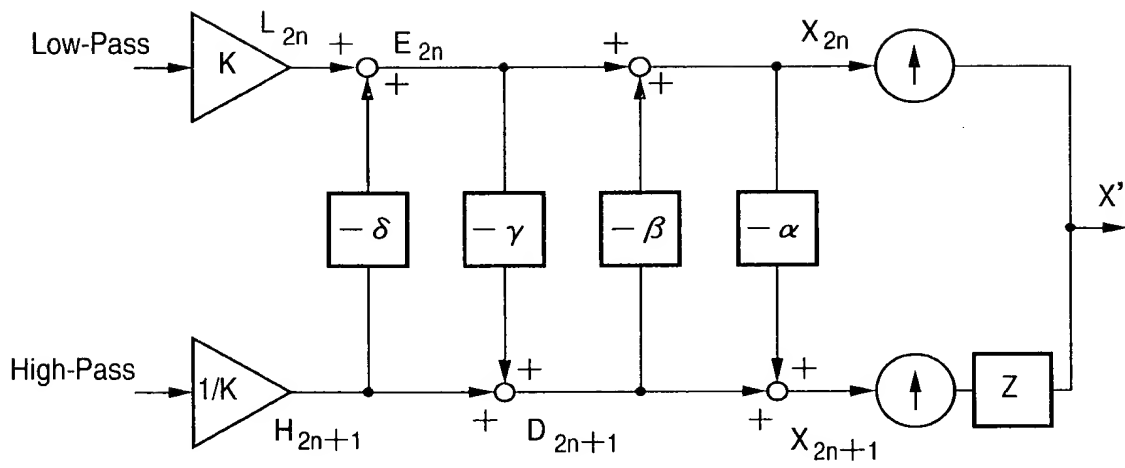


FIG. 30



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FIG. 31



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FIG. 32

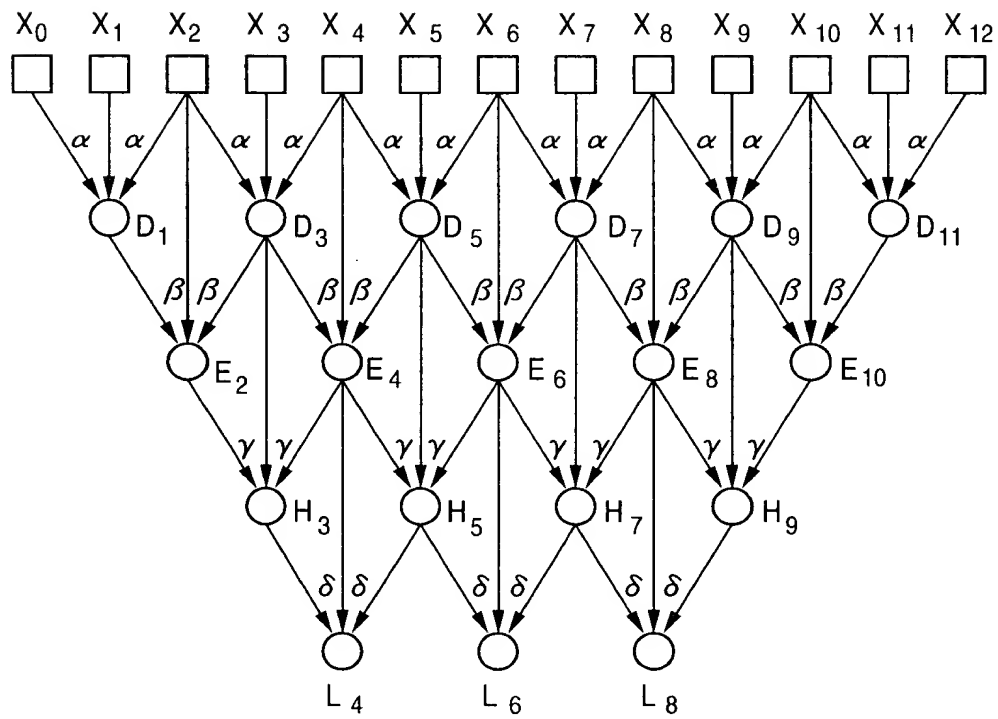


FIG. 33

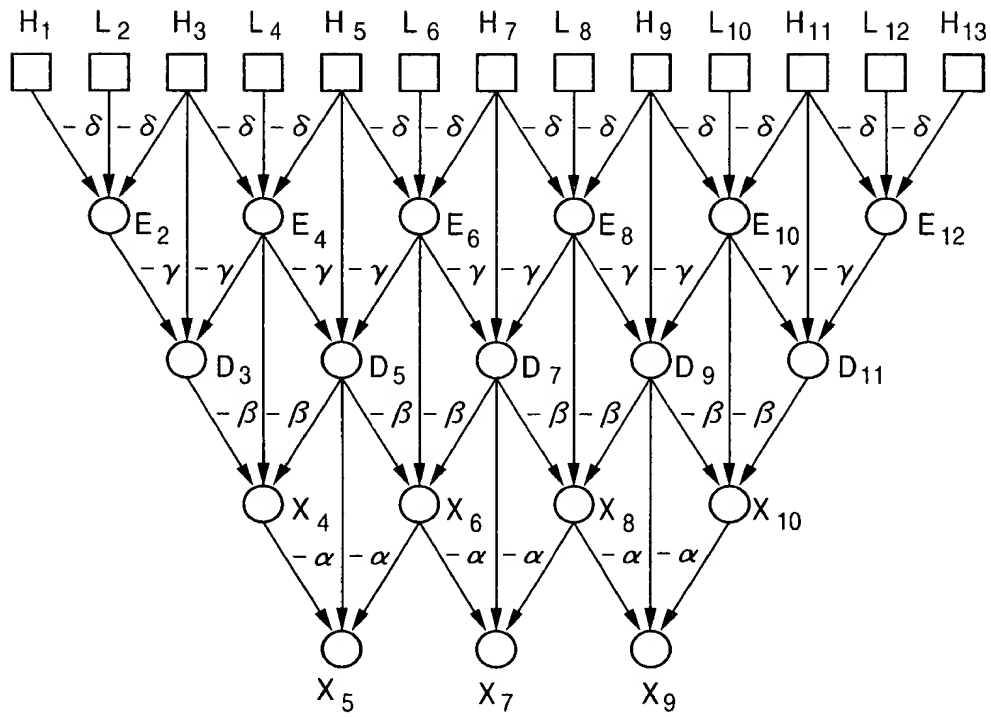


FIG. 34

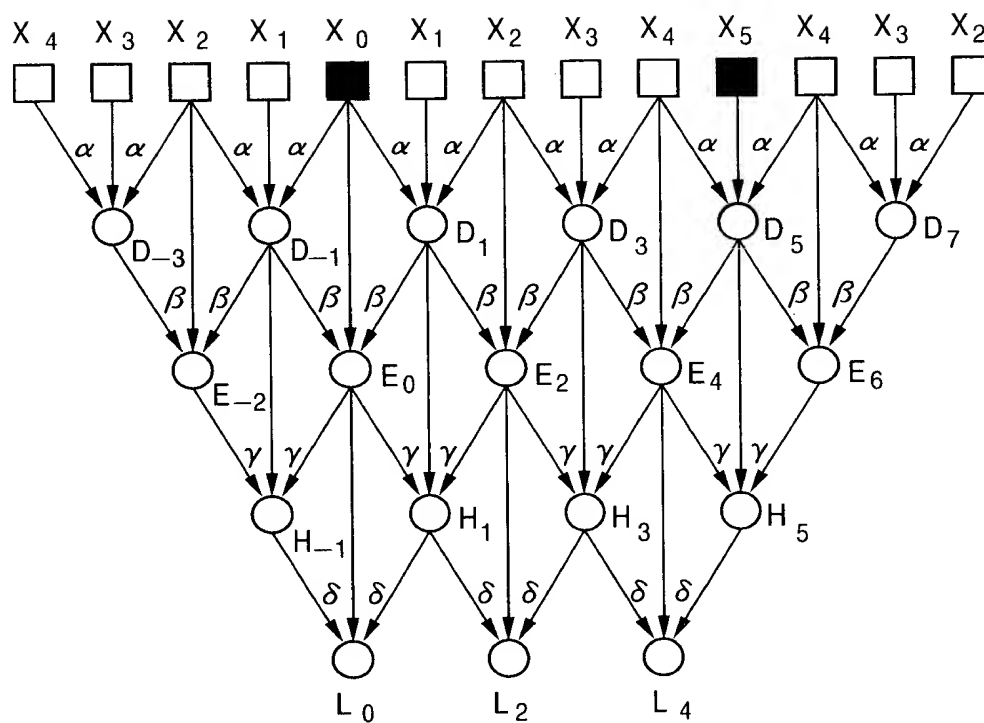
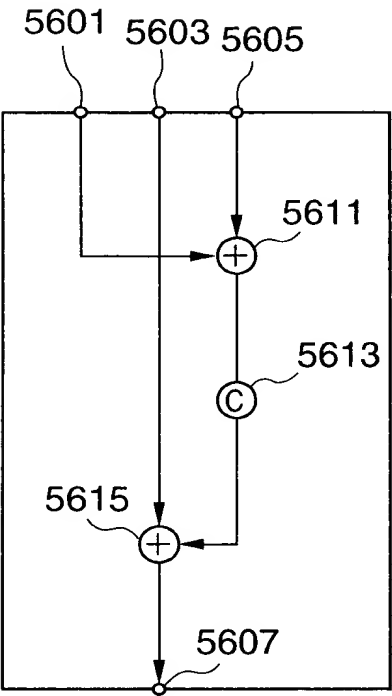


FIG. 35



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FIG. 36

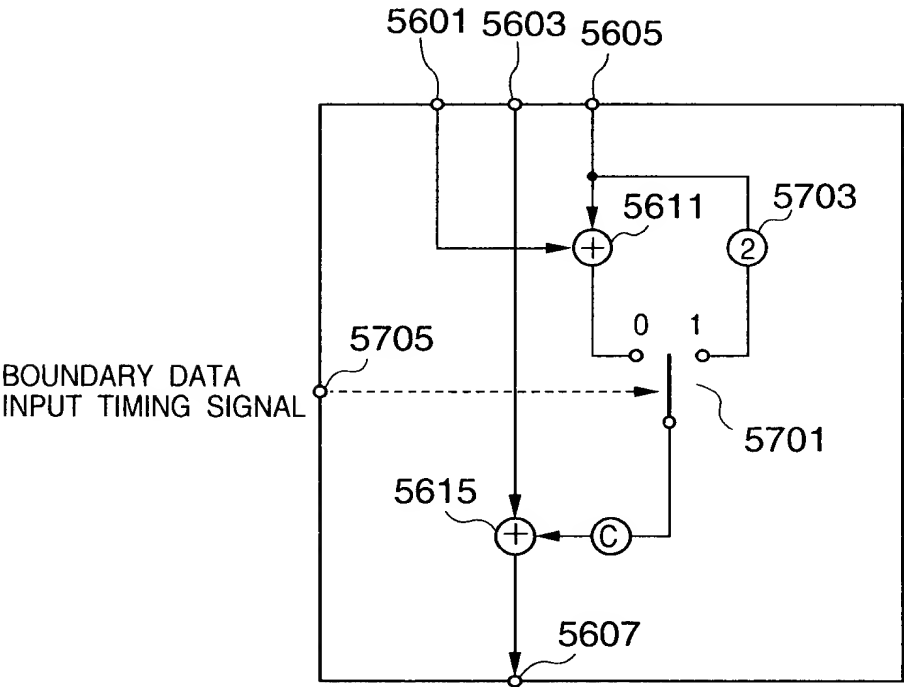


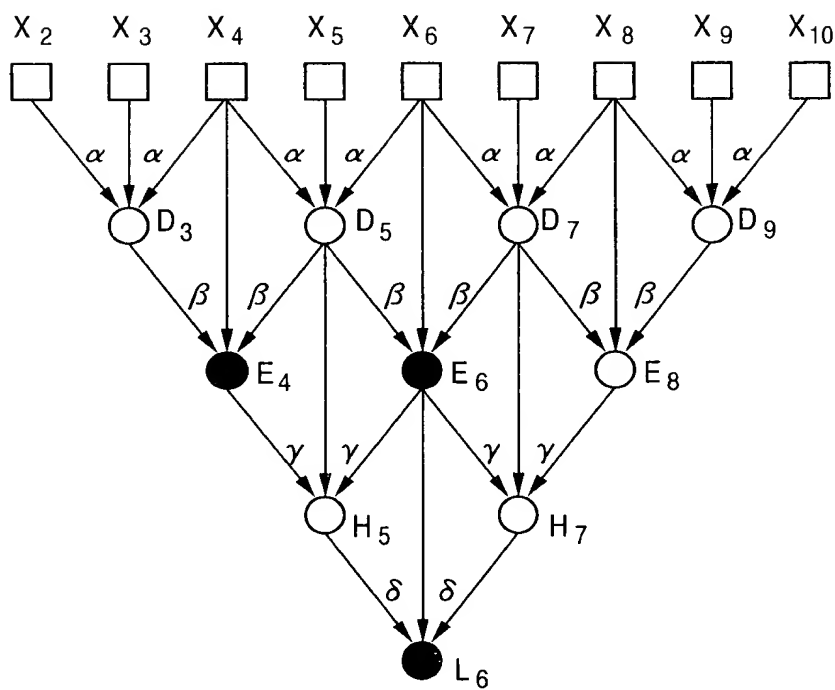
FIG. 37

FIG. 38

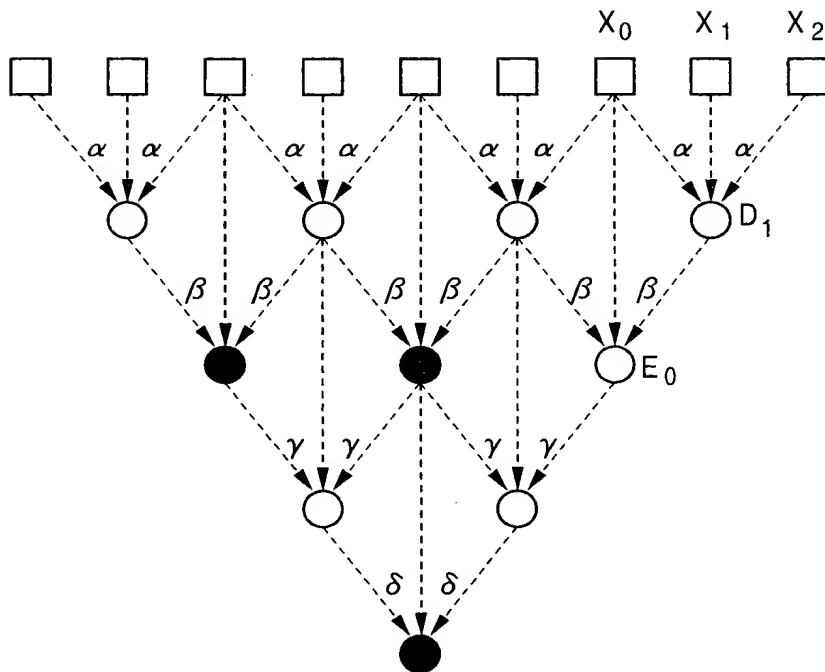


FIG. 39

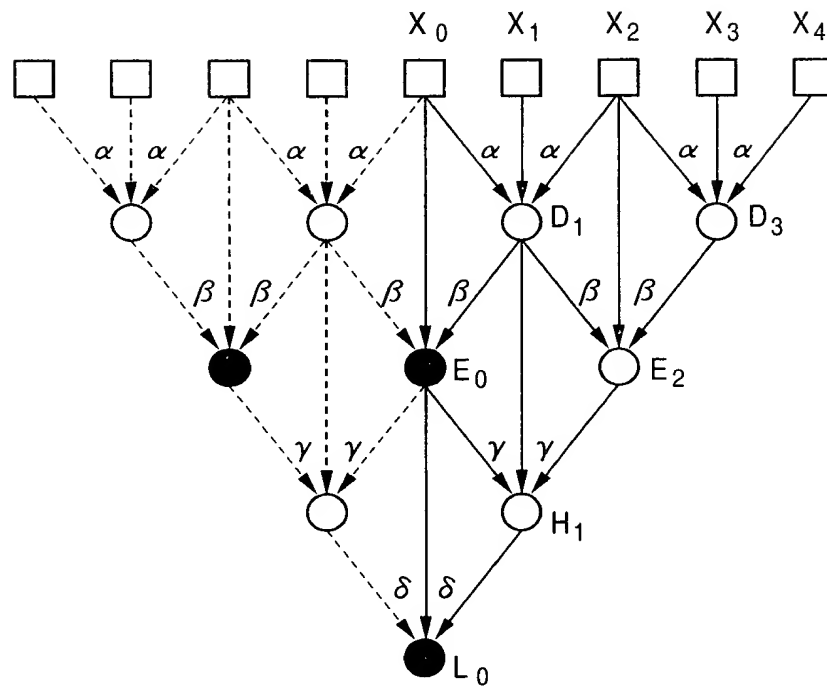


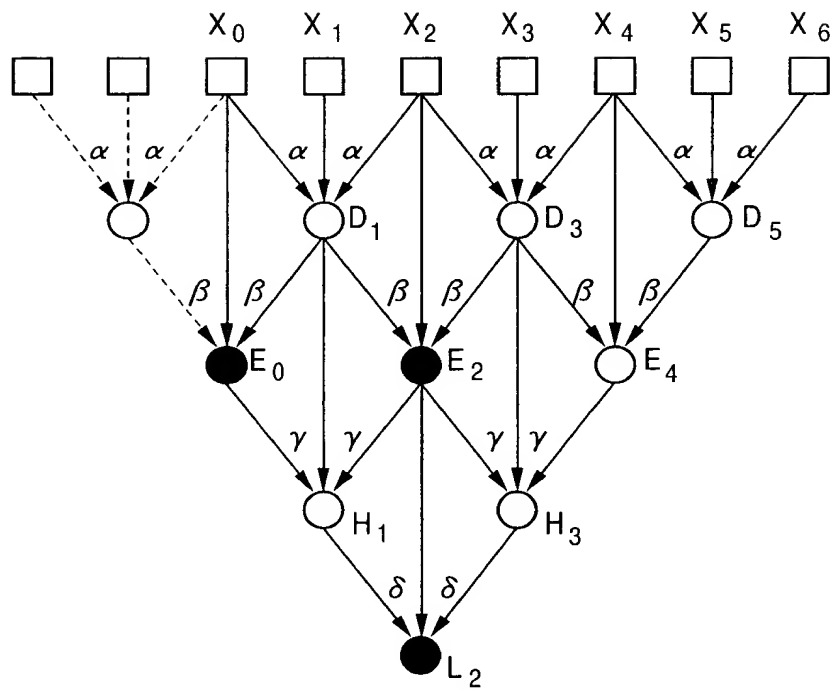
FIG. 40

FIG. 41

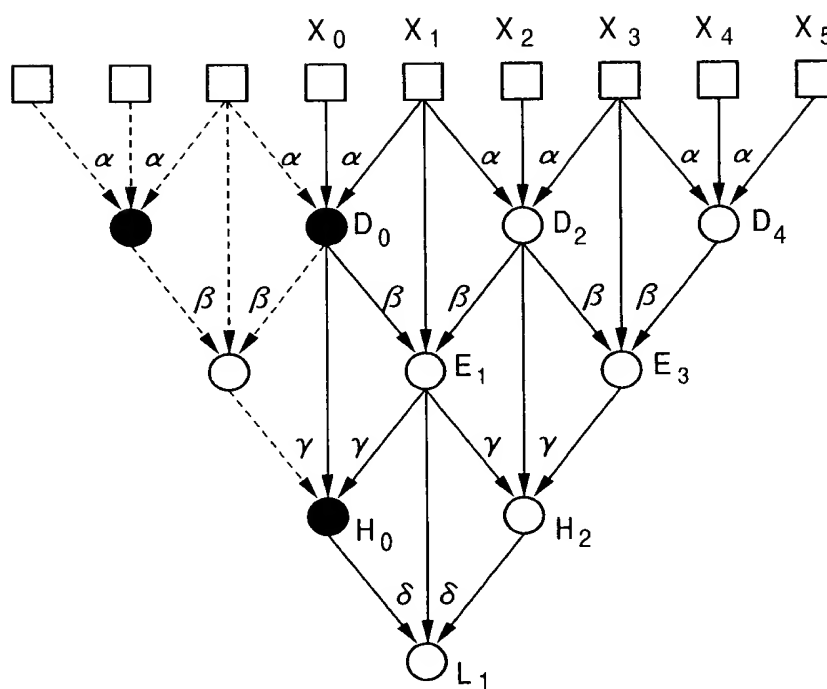


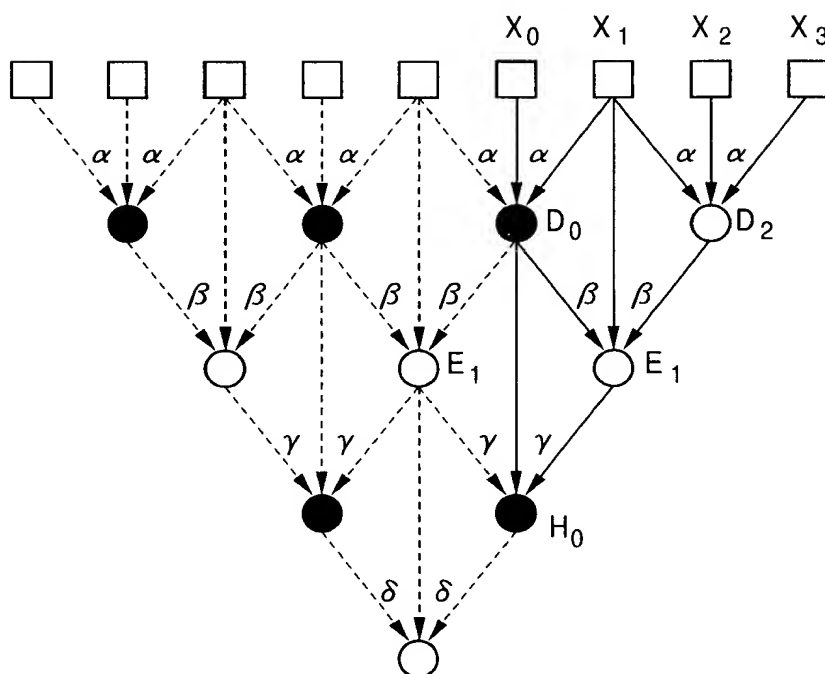
FIG. 42

FIG. 43

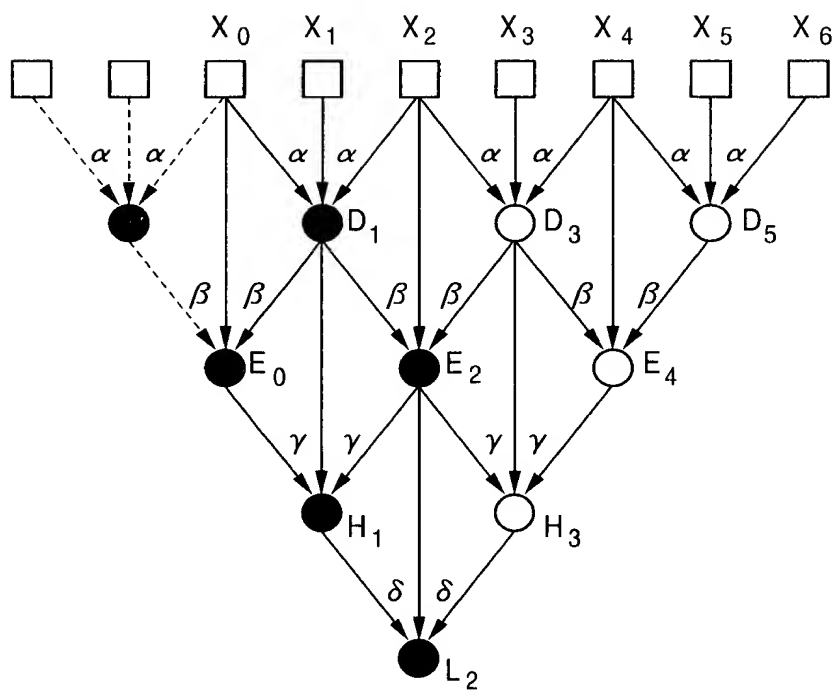


FIG. 44

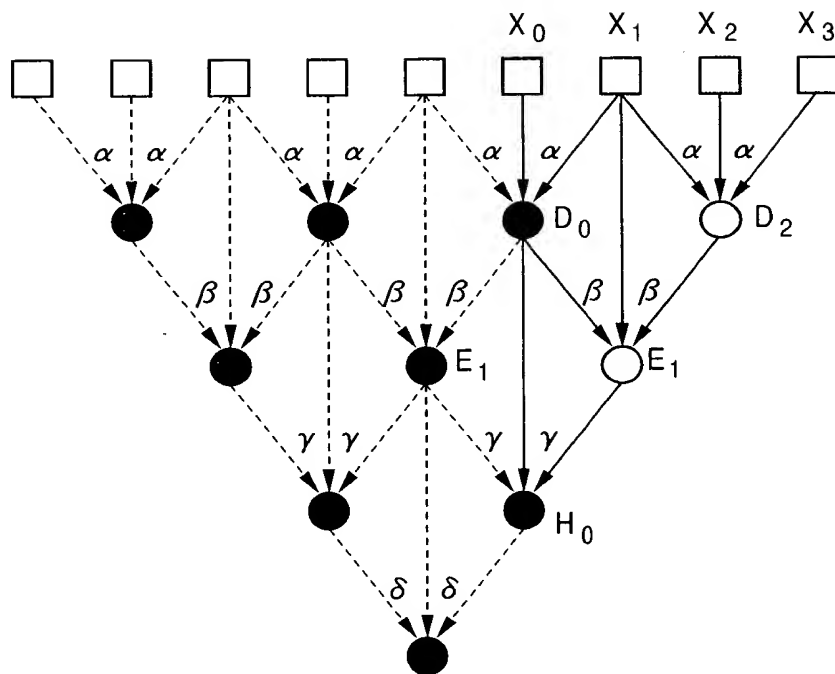


FIG. 45

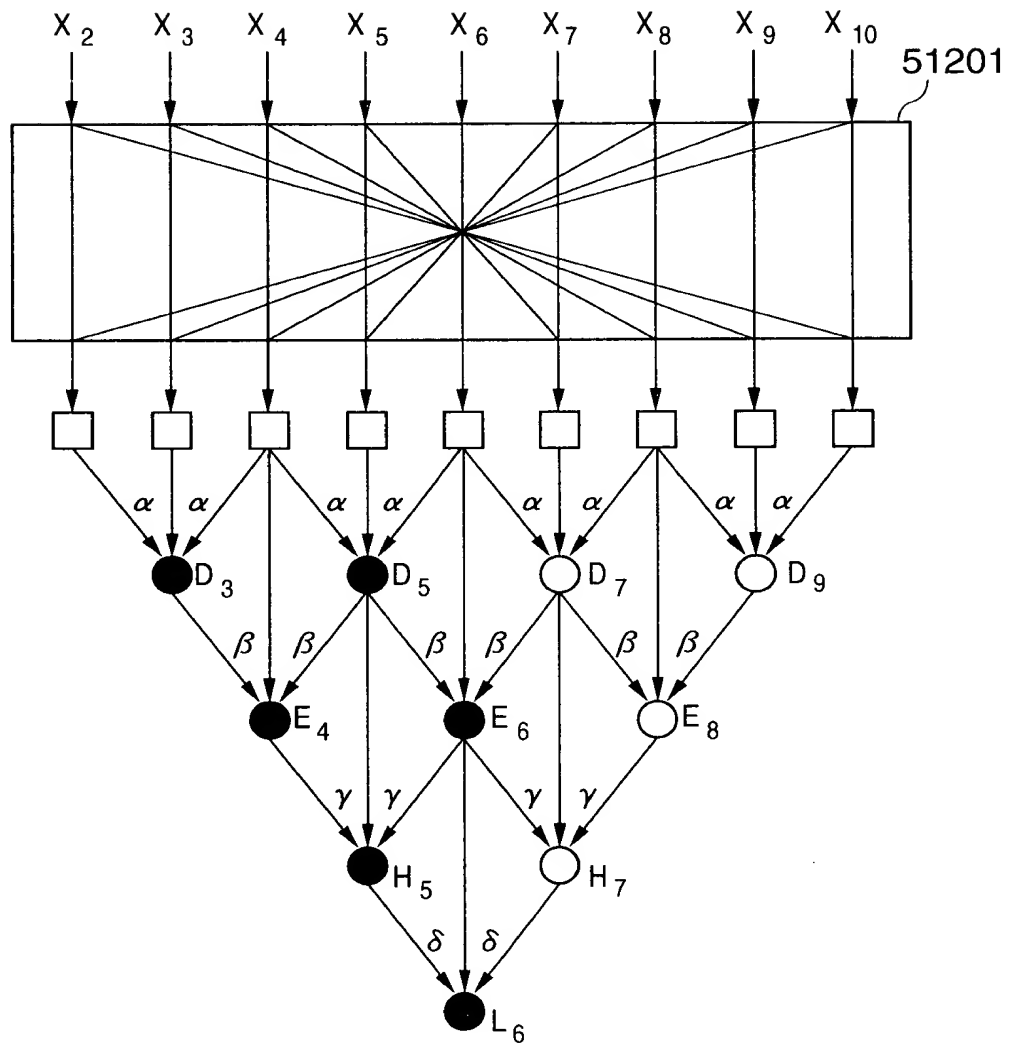


FIG. 46

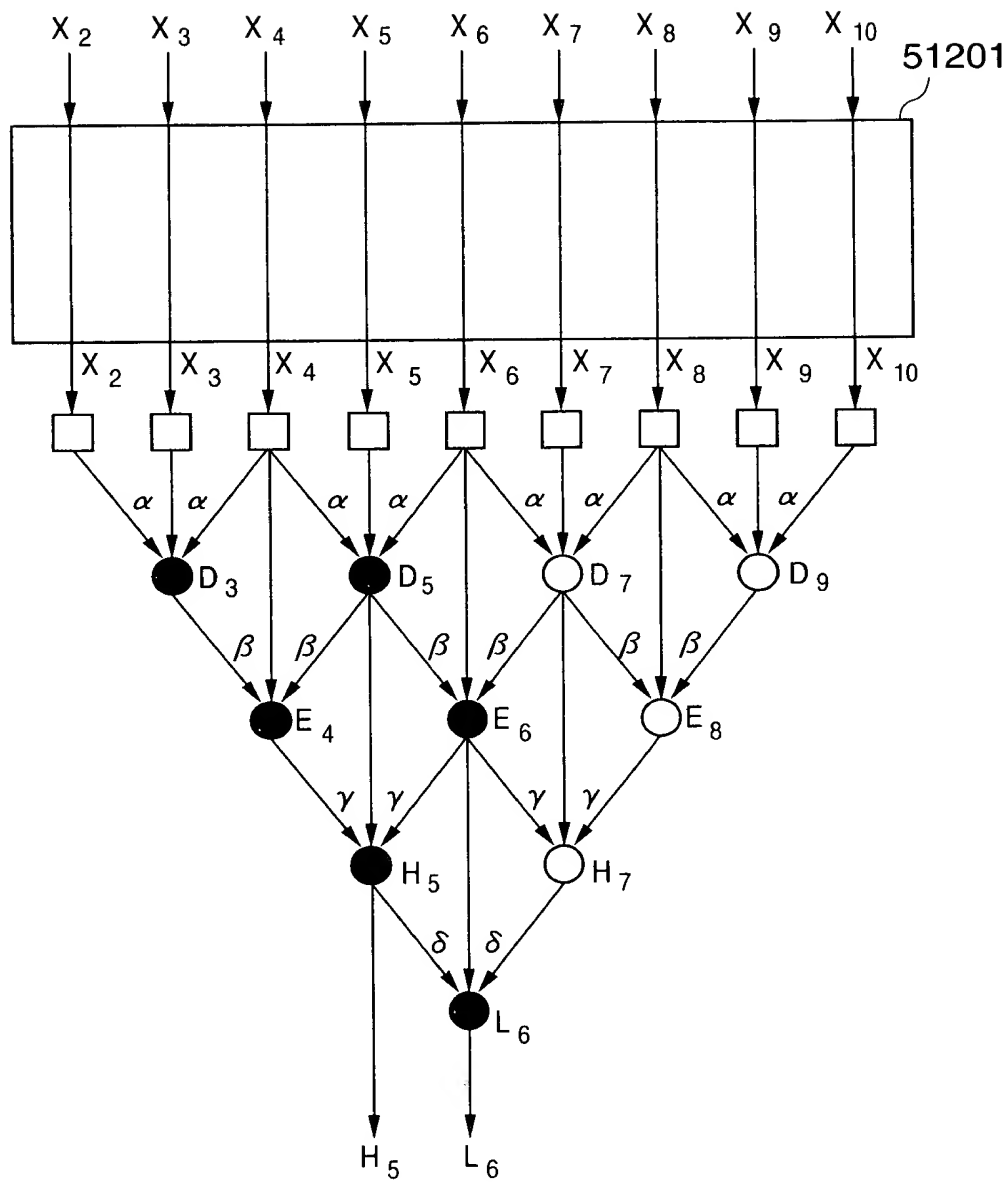


FIG. 47

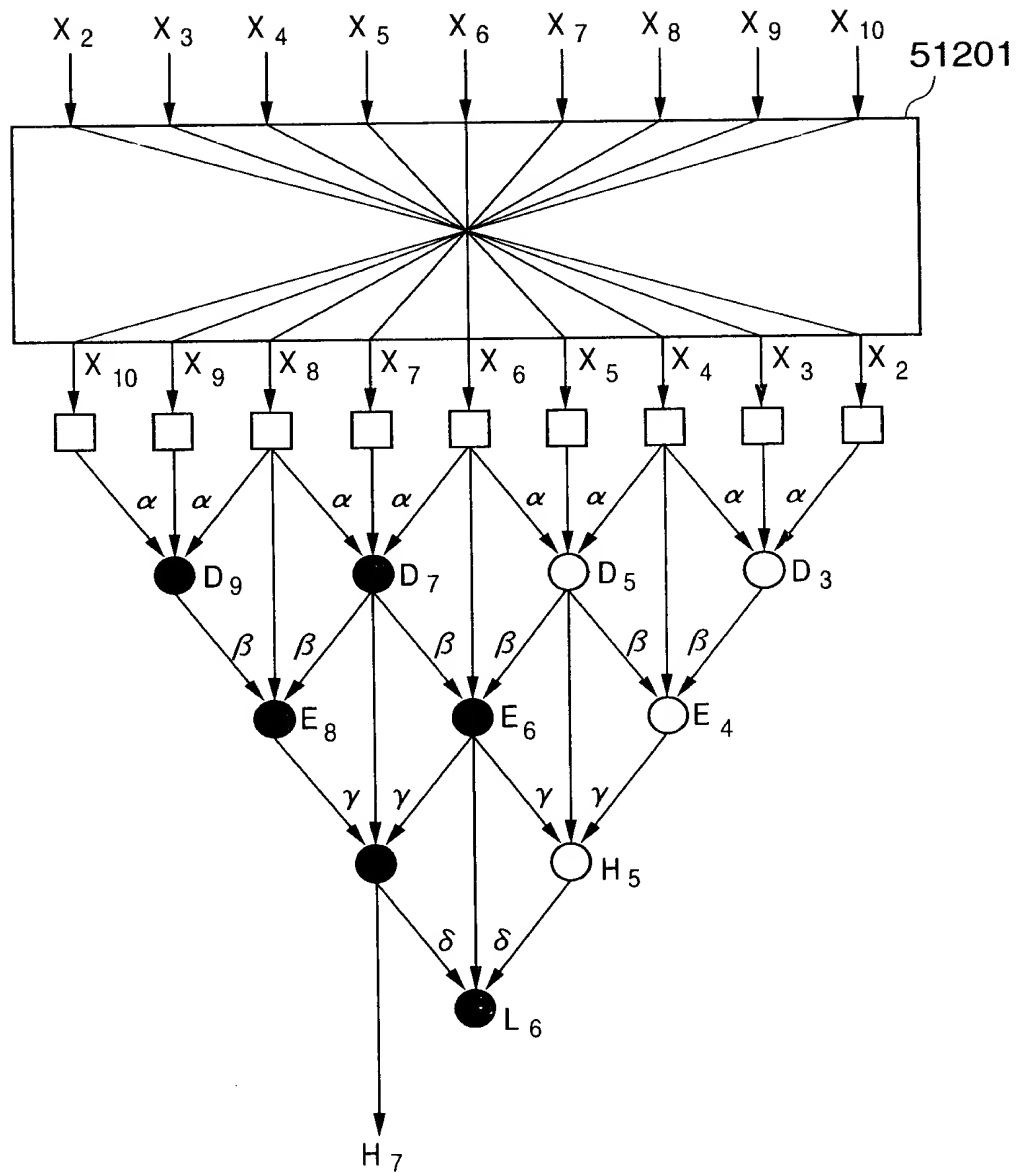
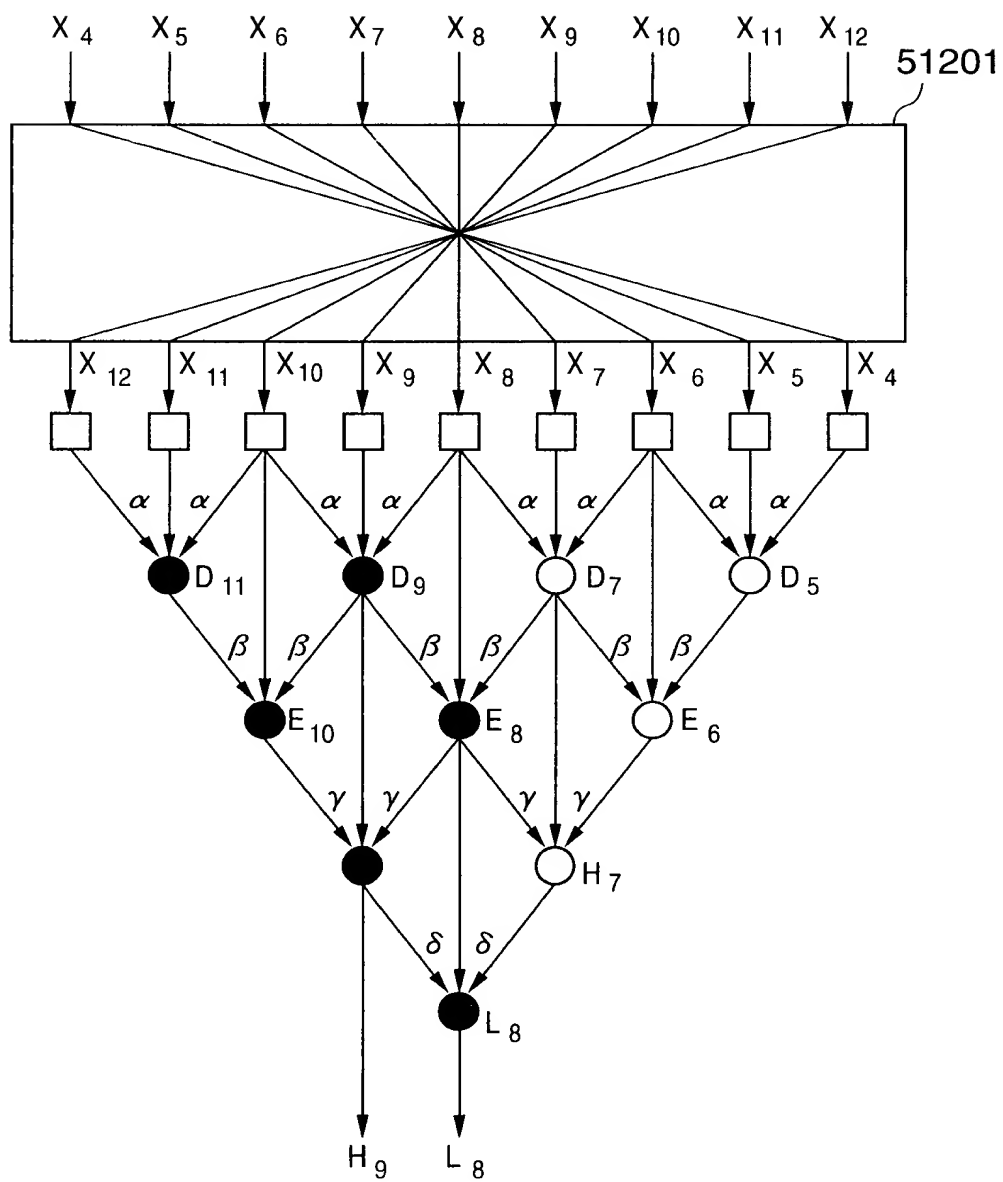


FIG. 48



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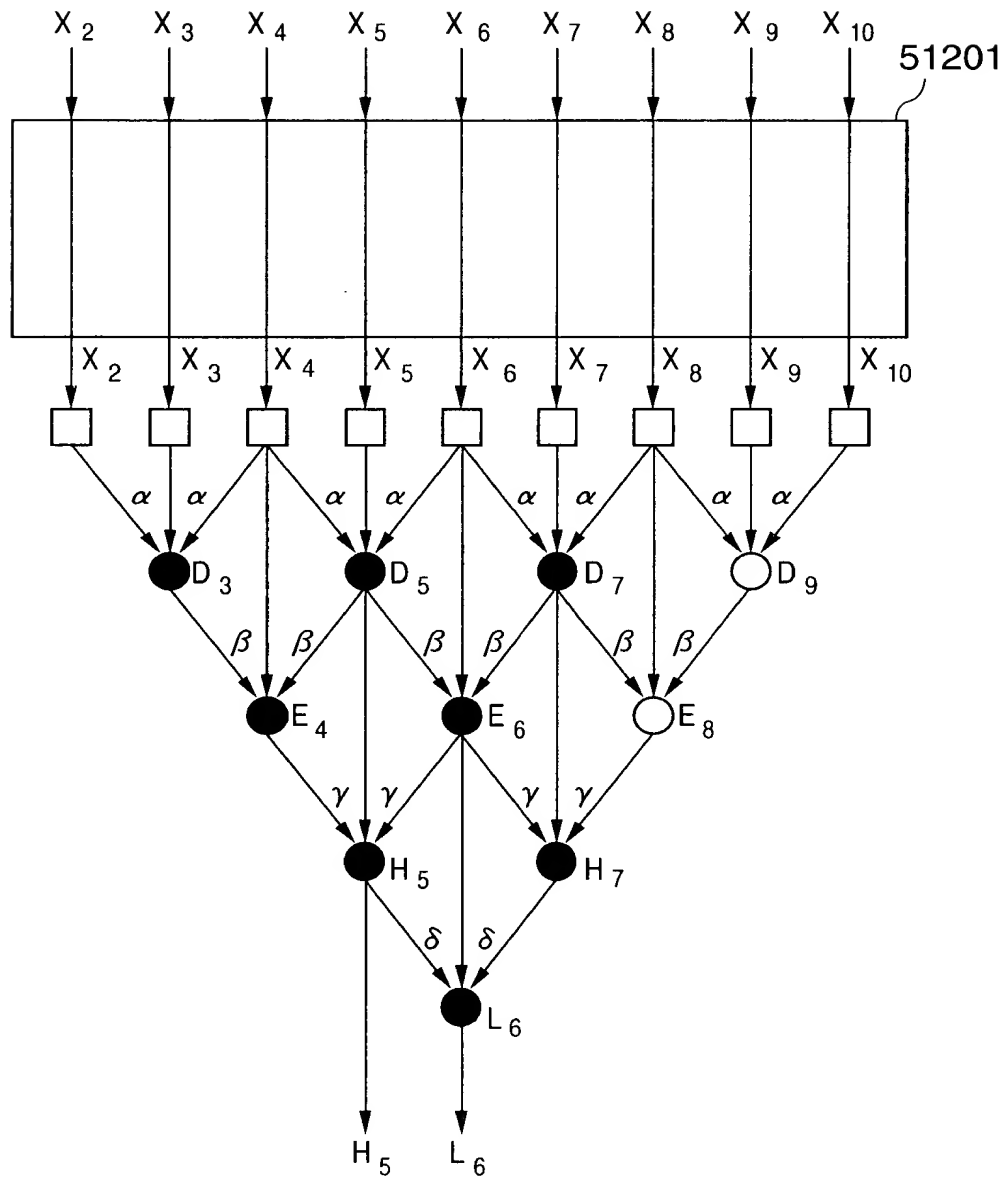


FIG. 50

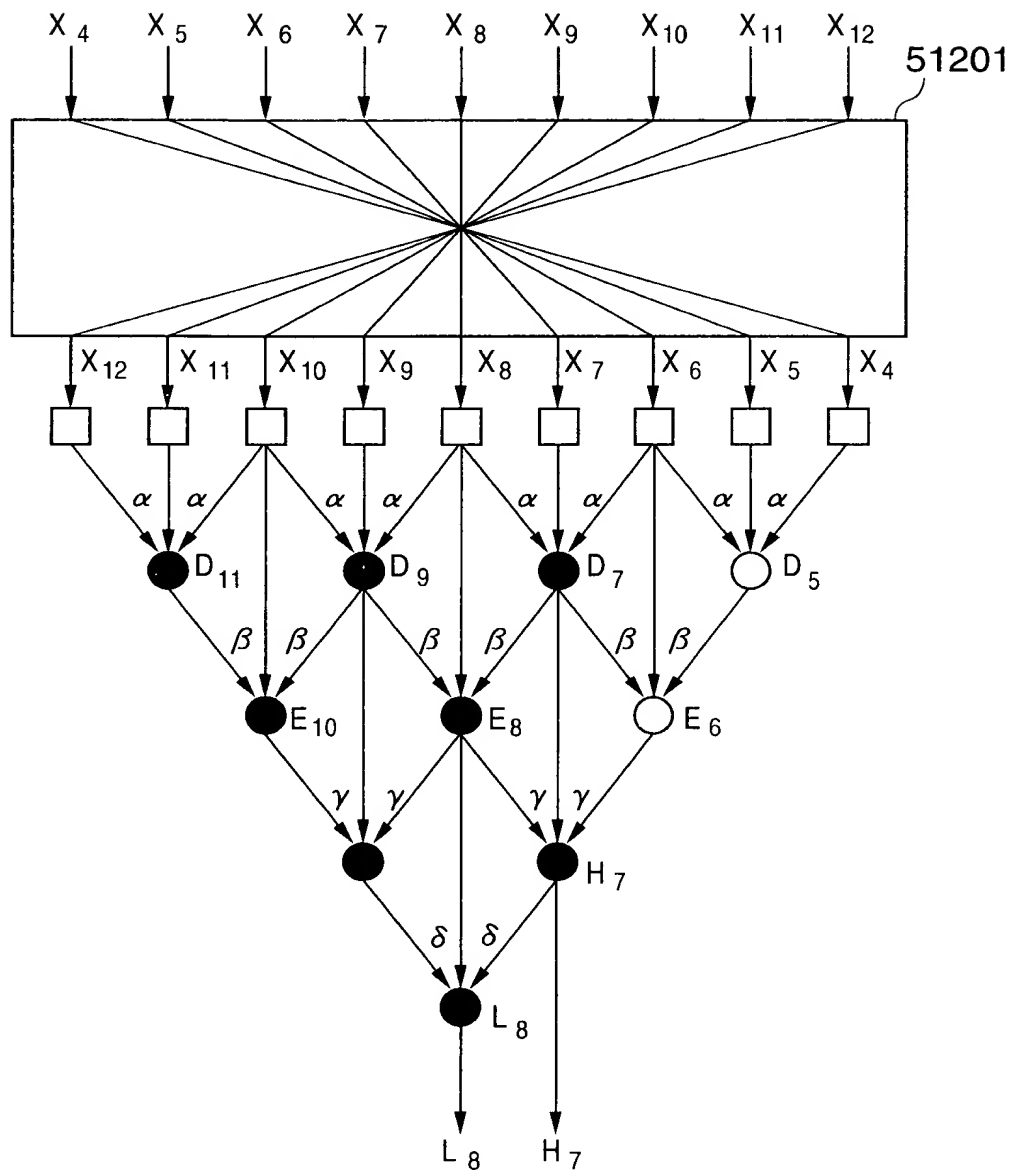
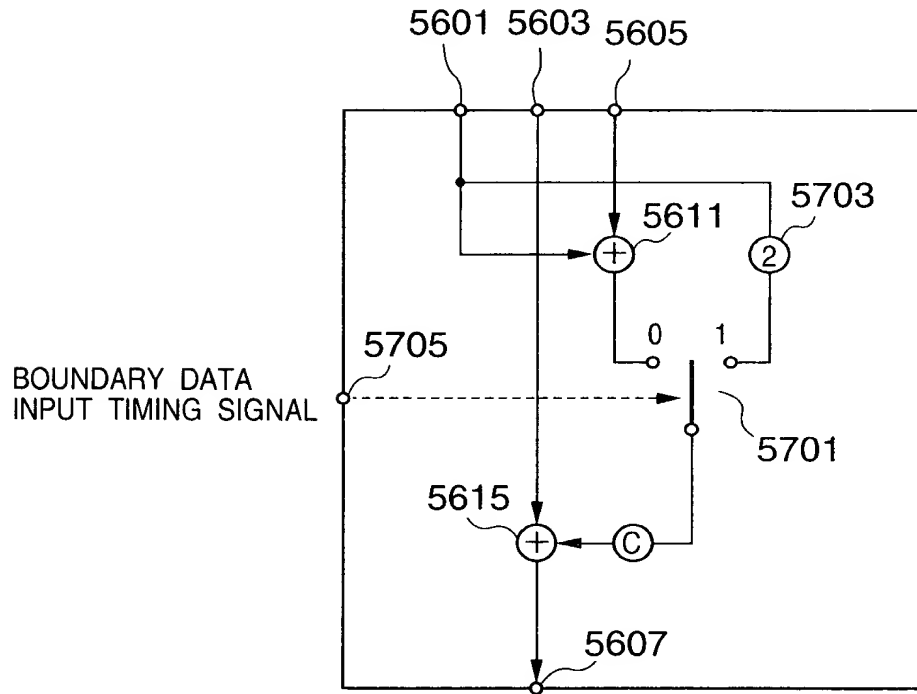


FIG. 51



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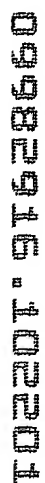


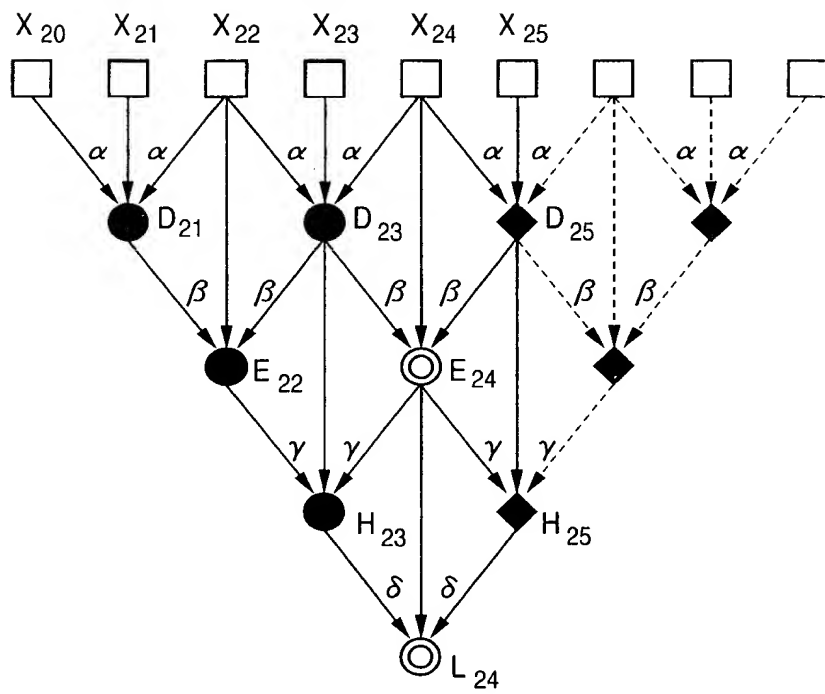
FIG. 53

FIG. 54

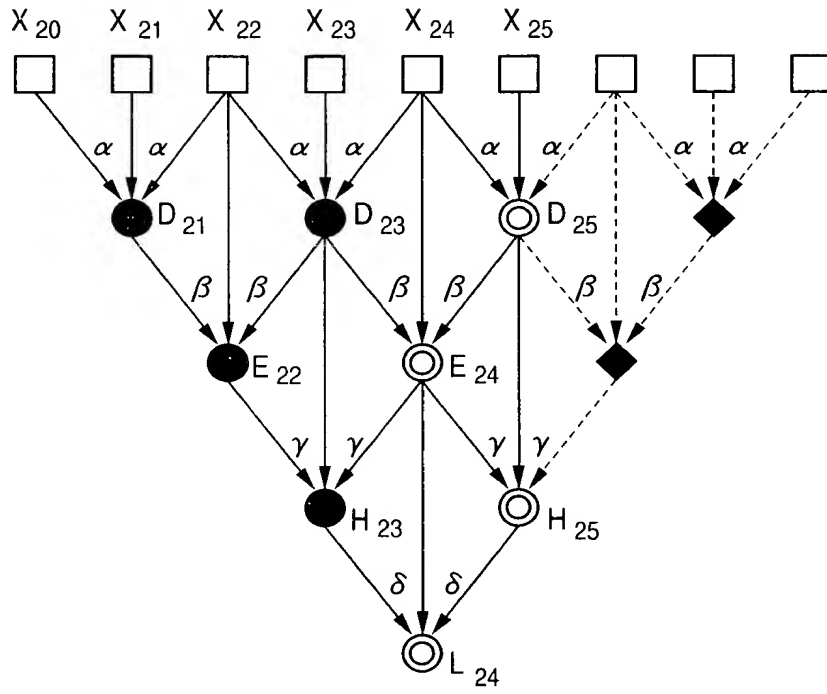
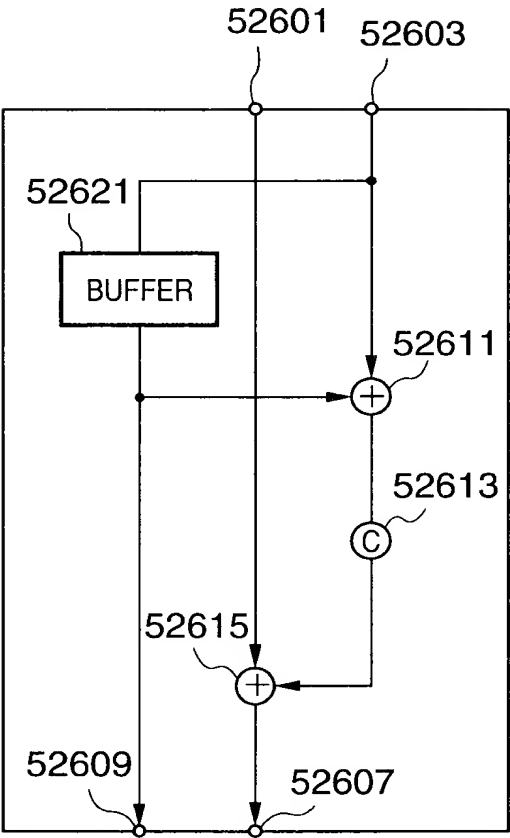


FIG. 55



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FIG. 56

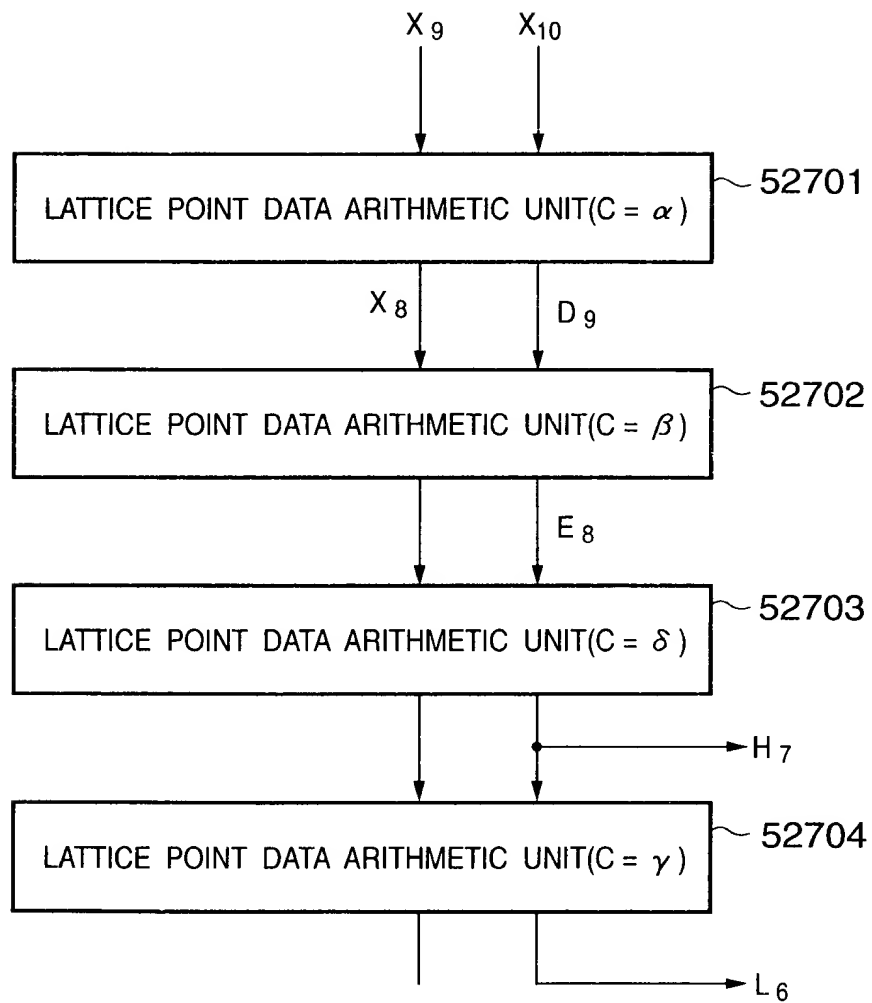
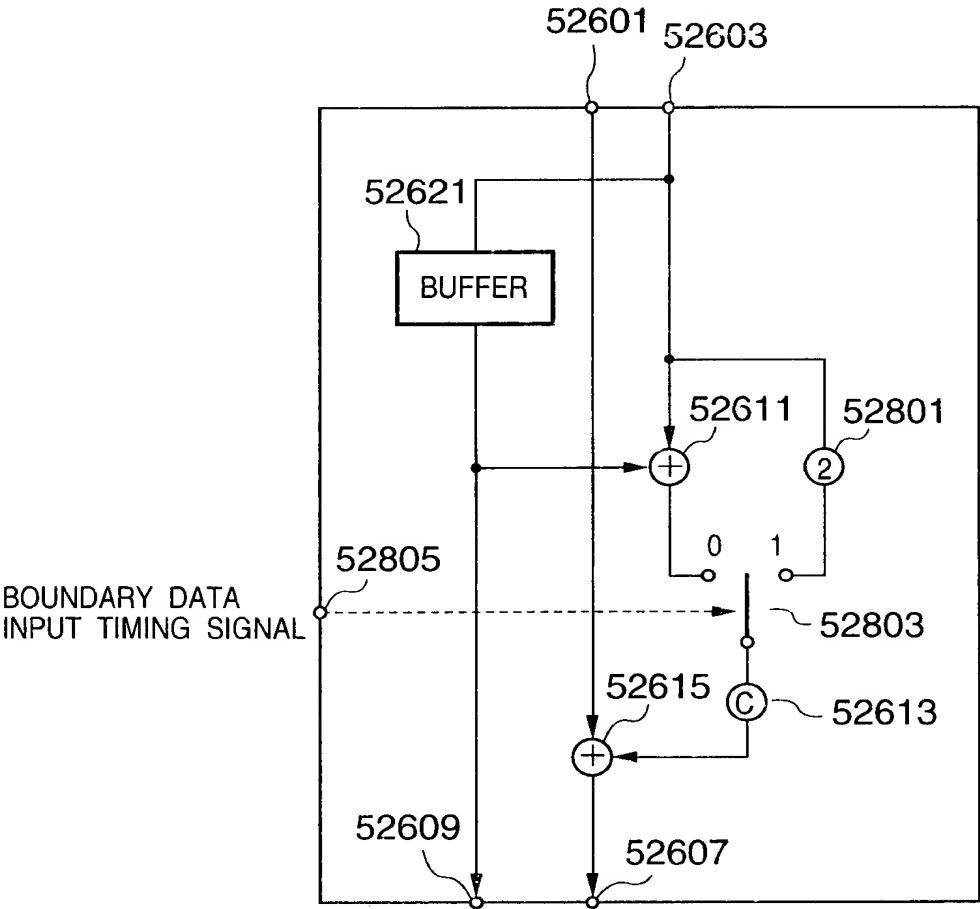


FIG. 57



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FIG. 59

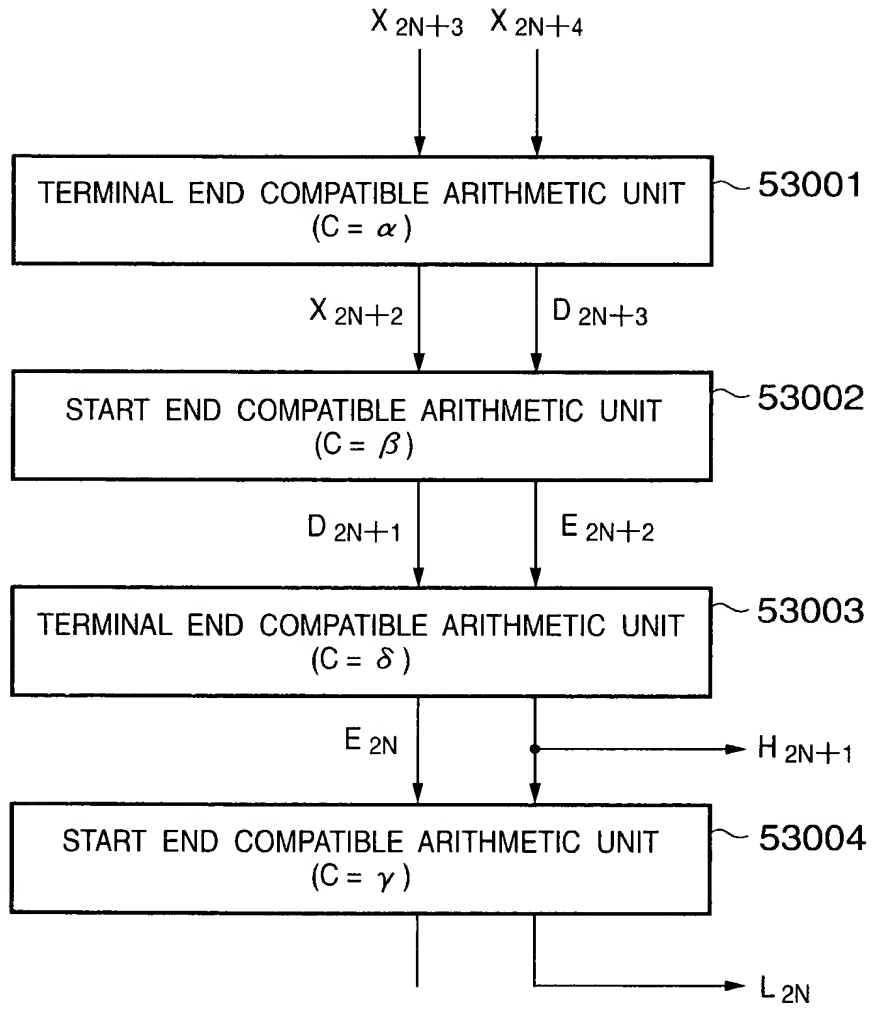


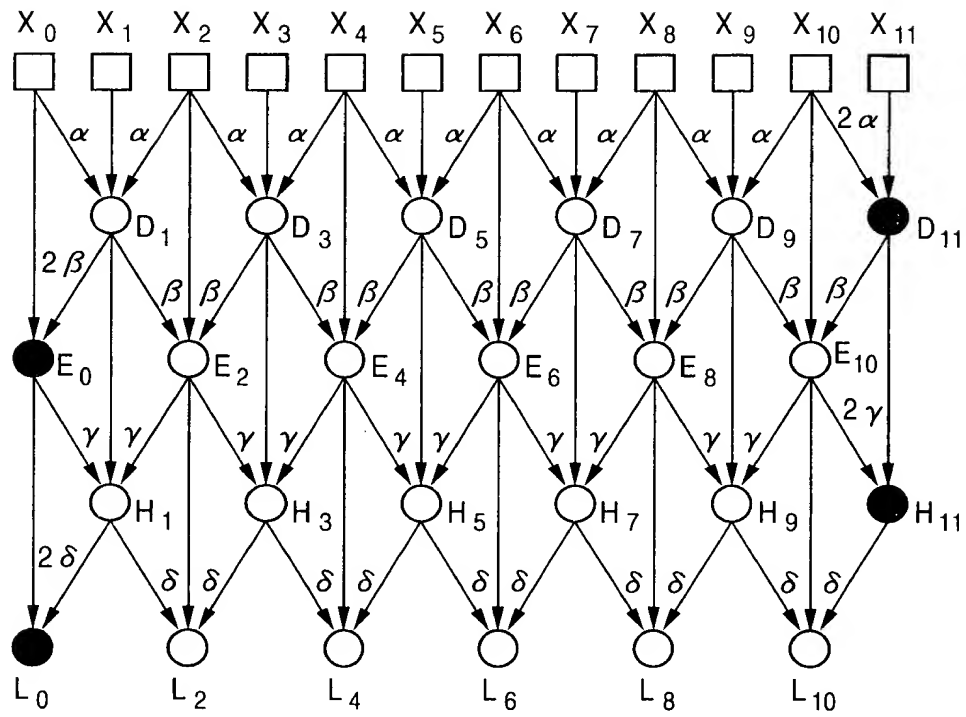
FIG. 60

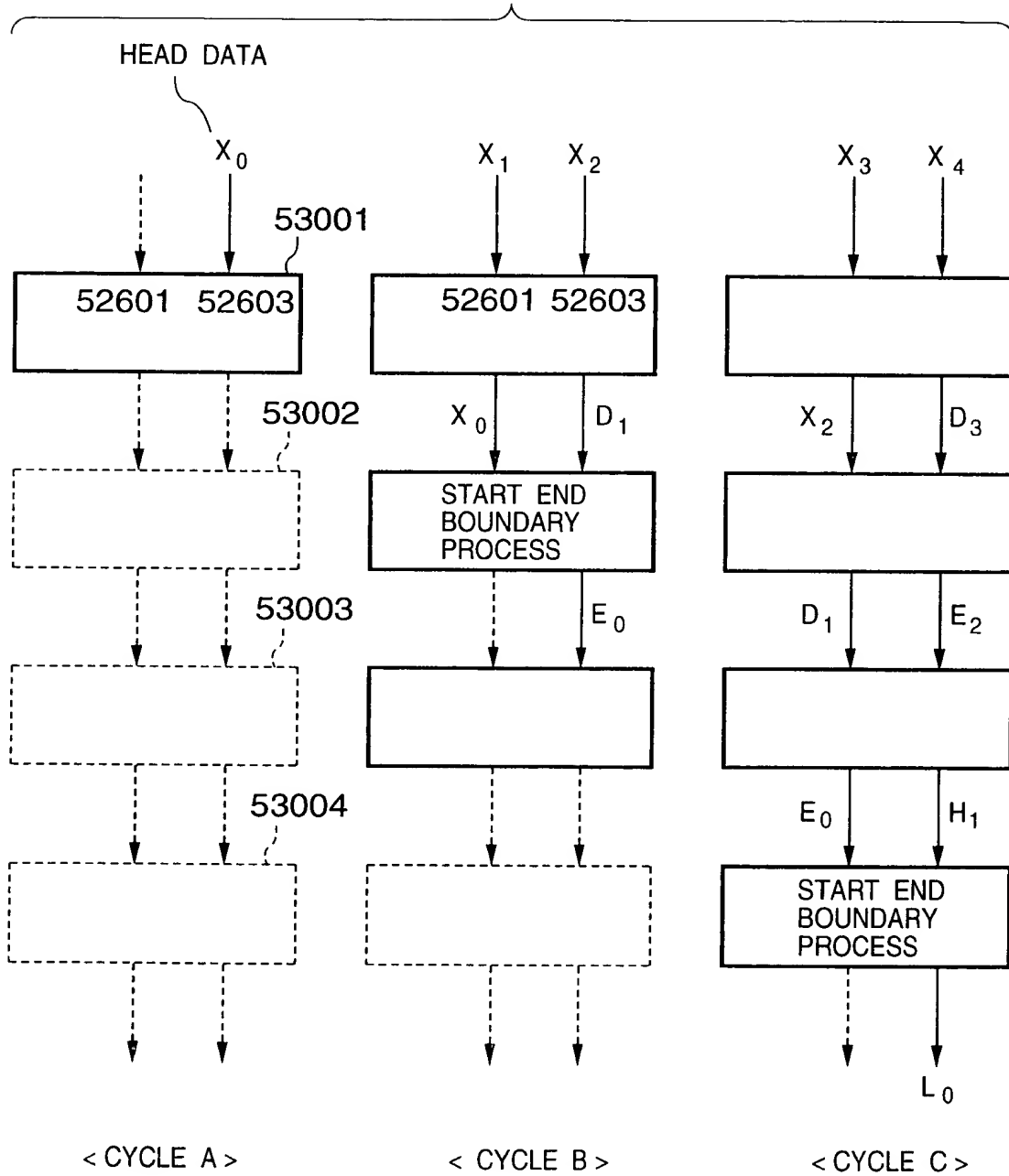
FIG. 61

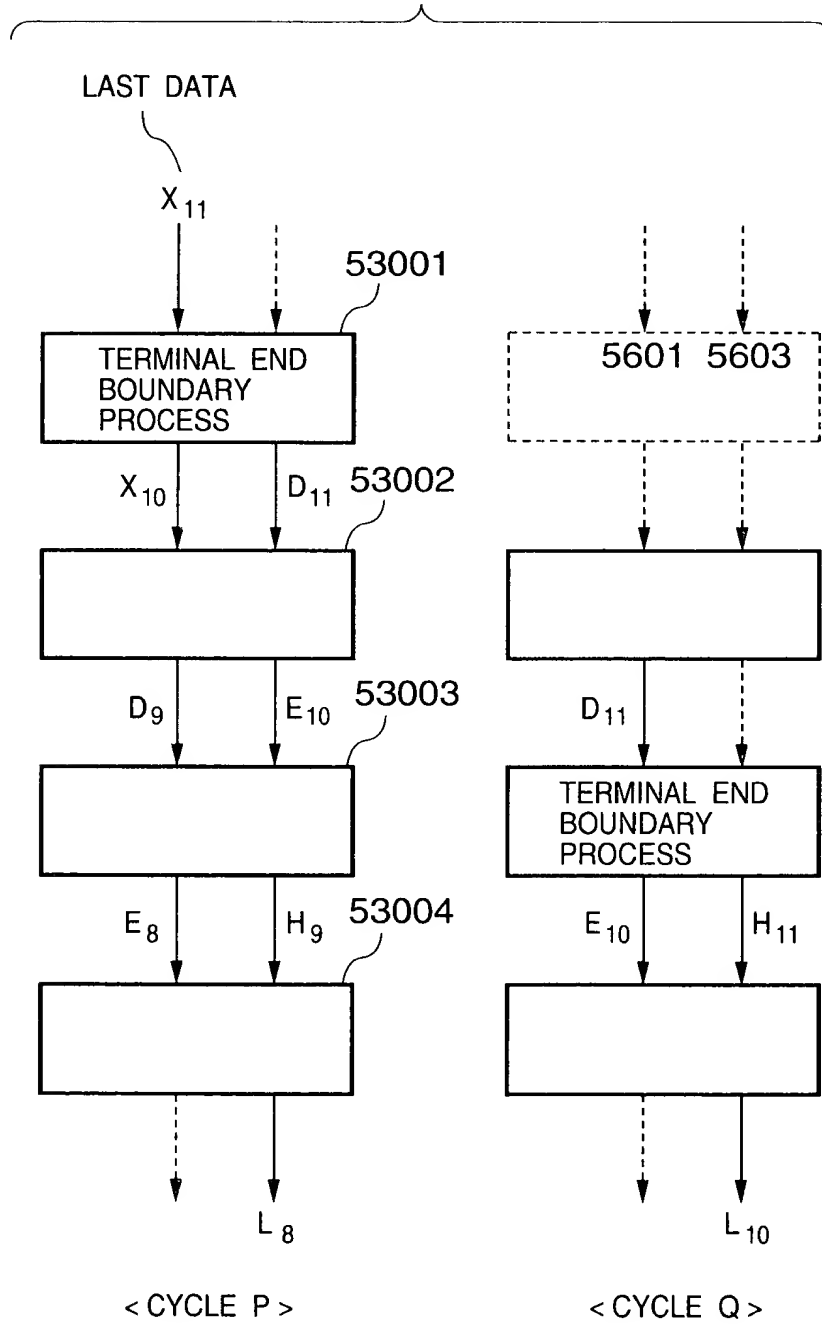
FIG. 62

FIG. 63

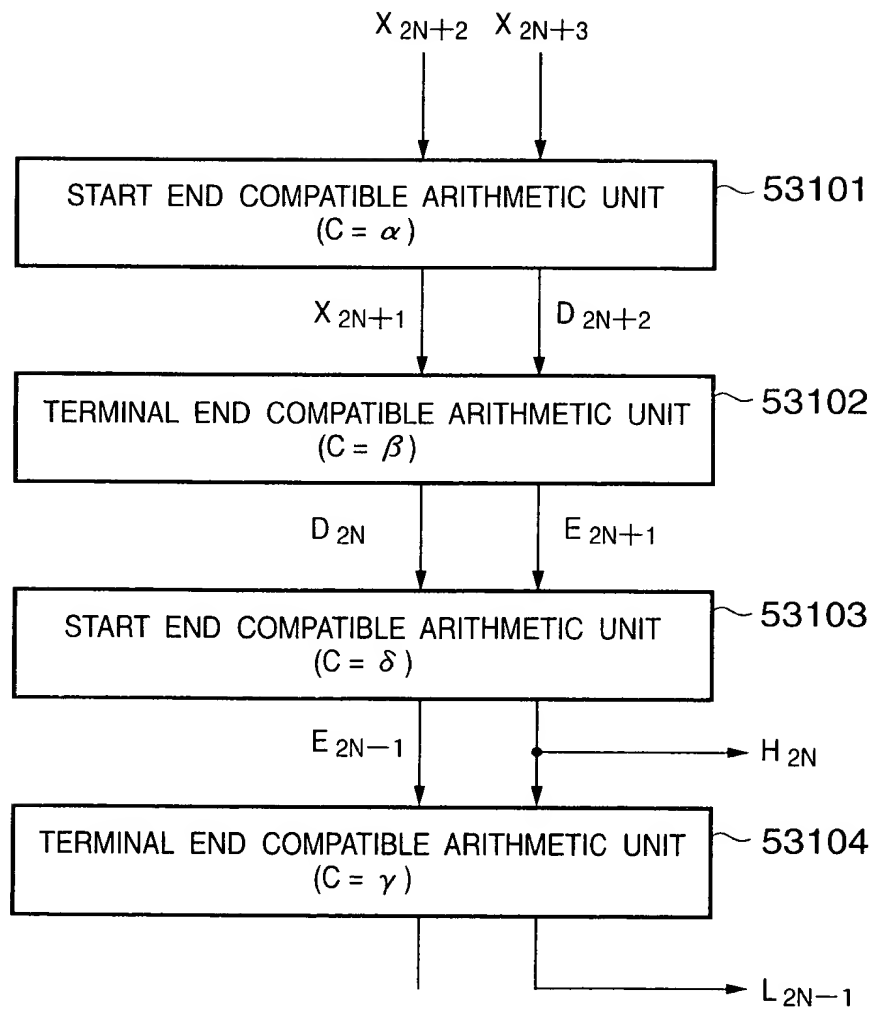


FIG. 64

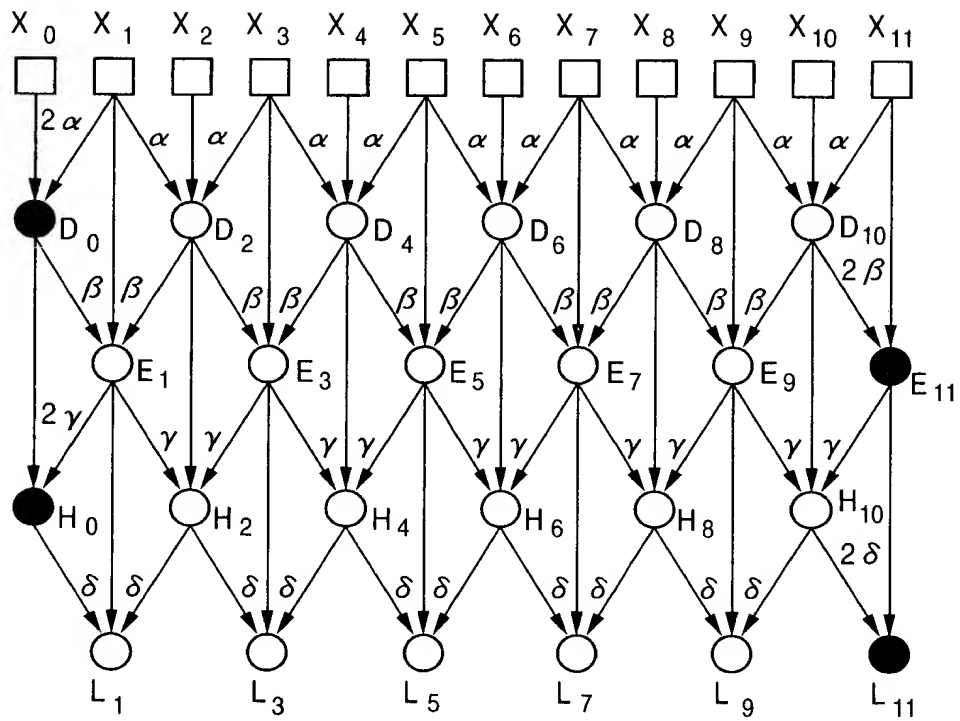


FIG. 65

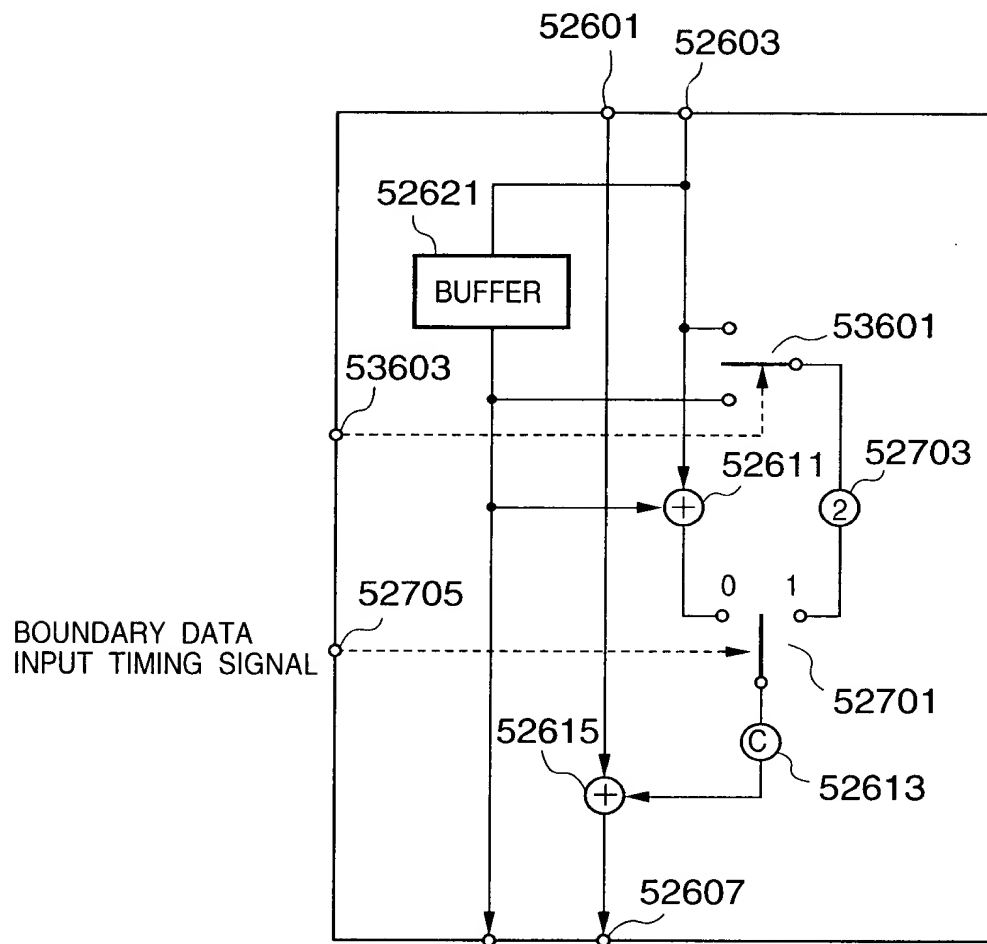


FIG. 66

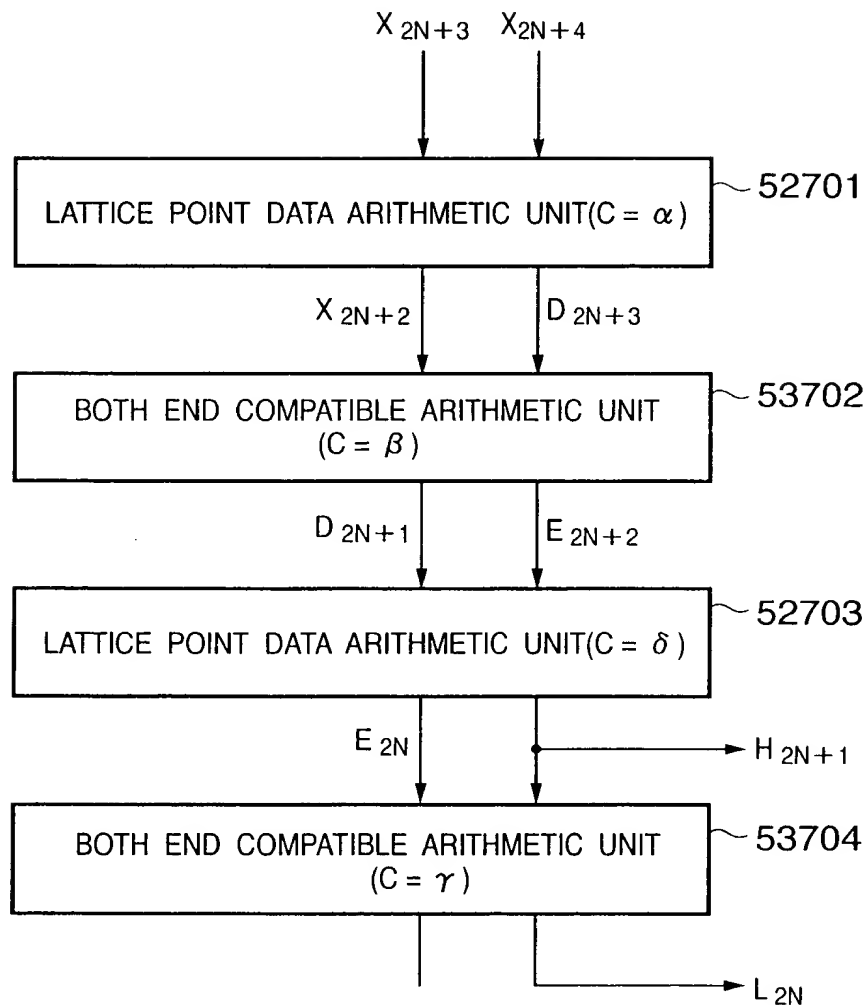


FIG. 67

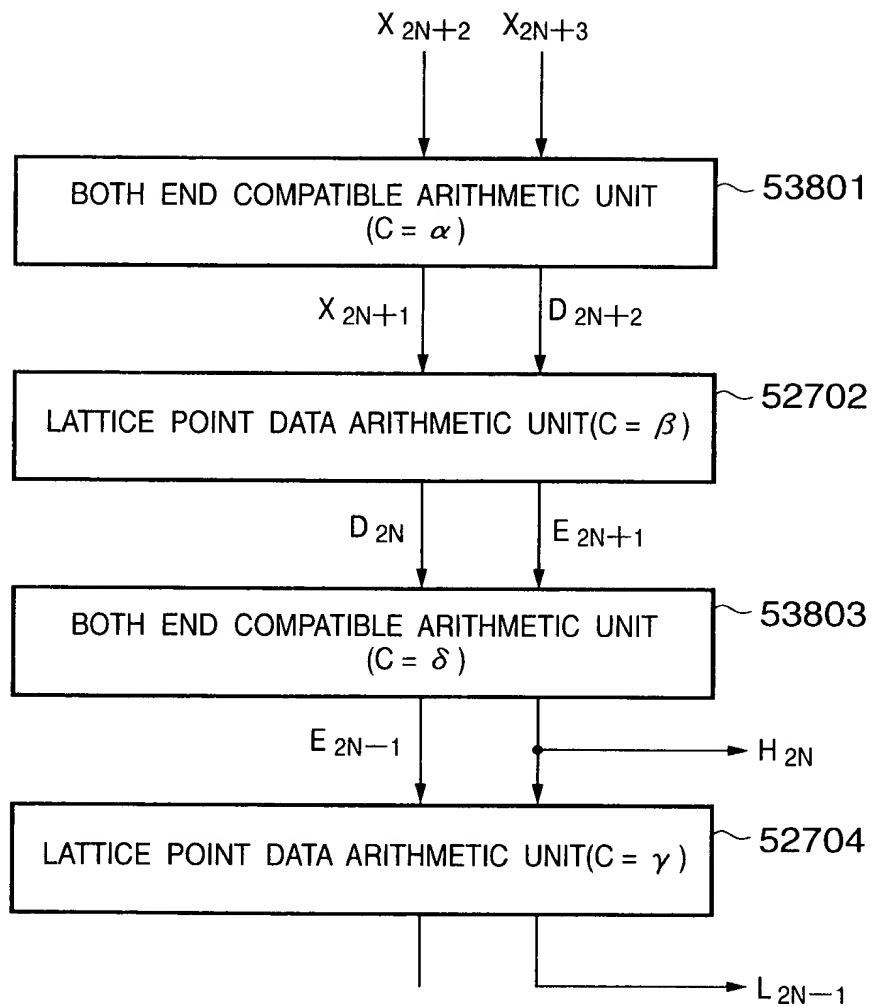


FIG. 68

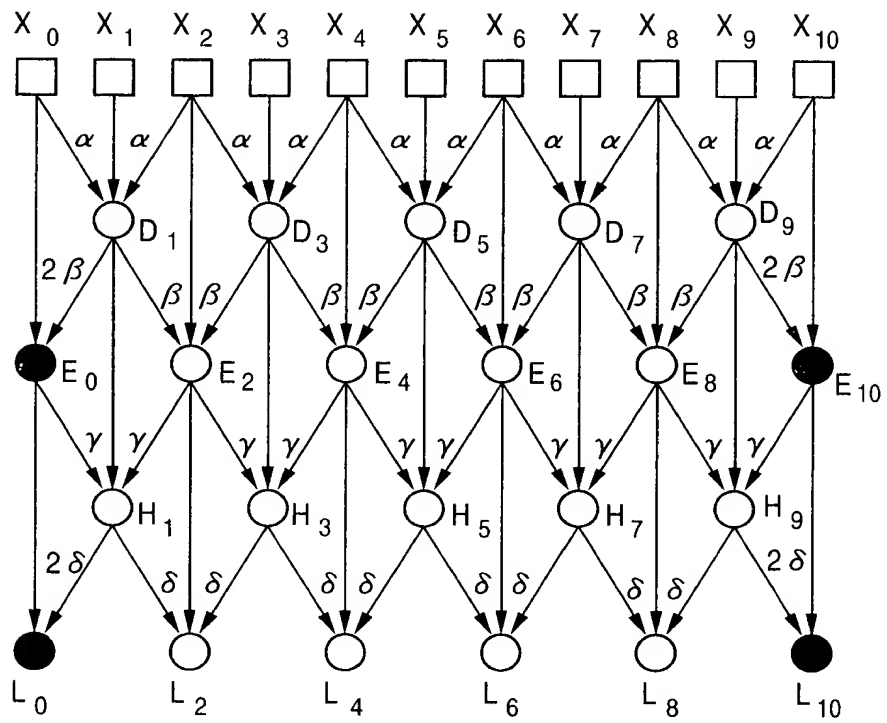
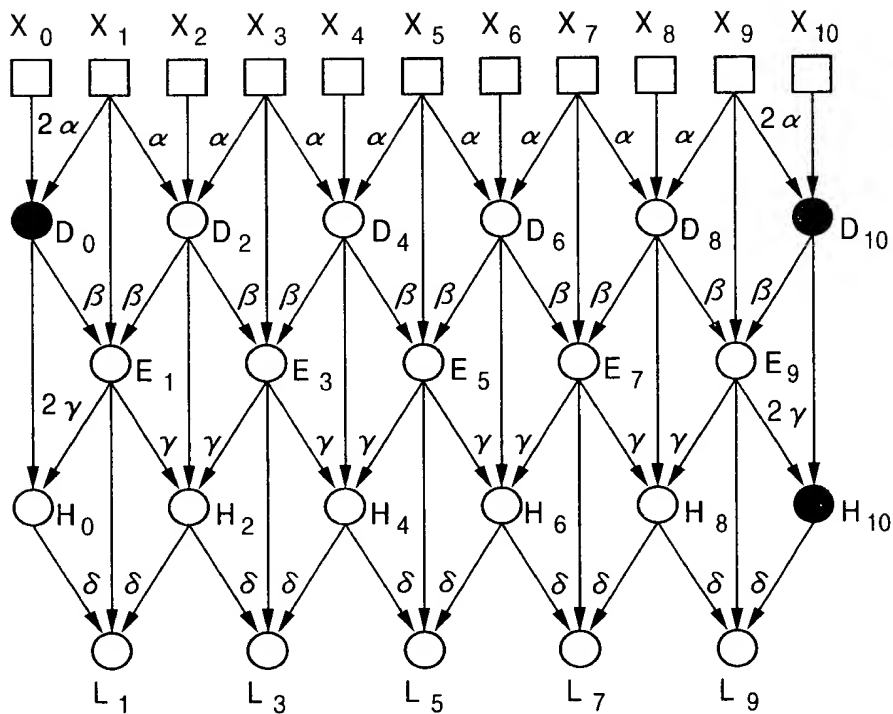


FIG. 69



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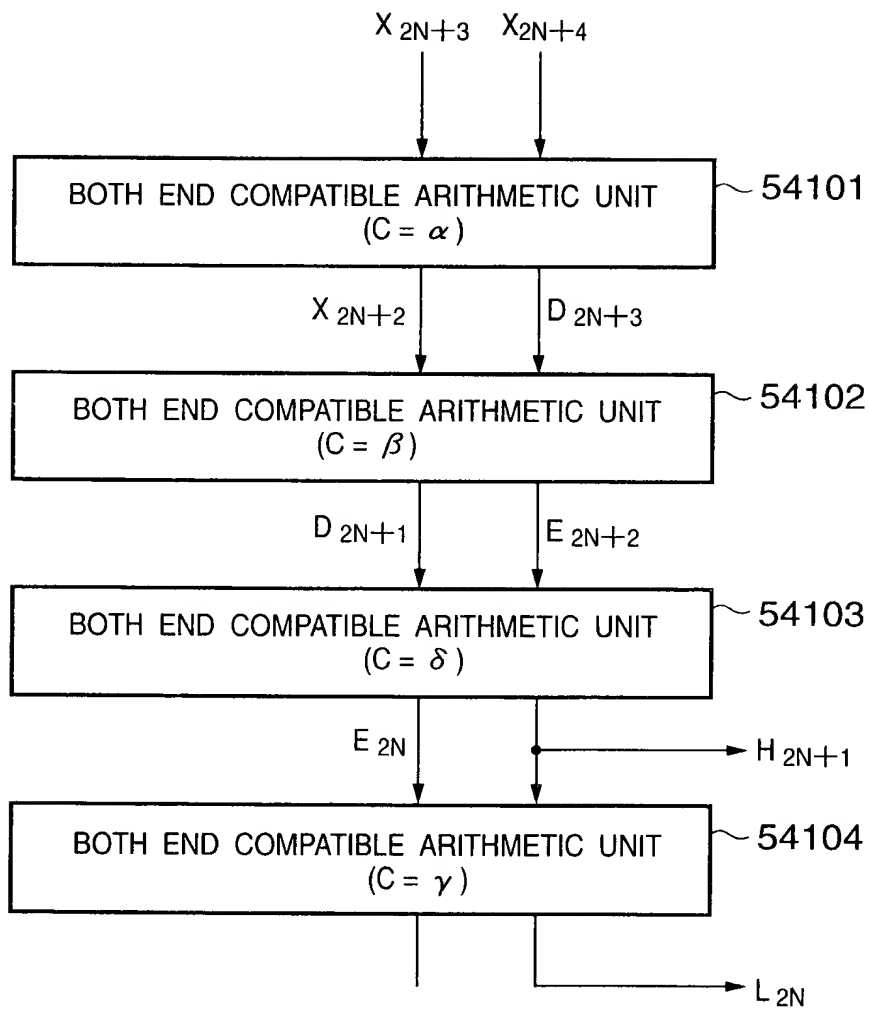
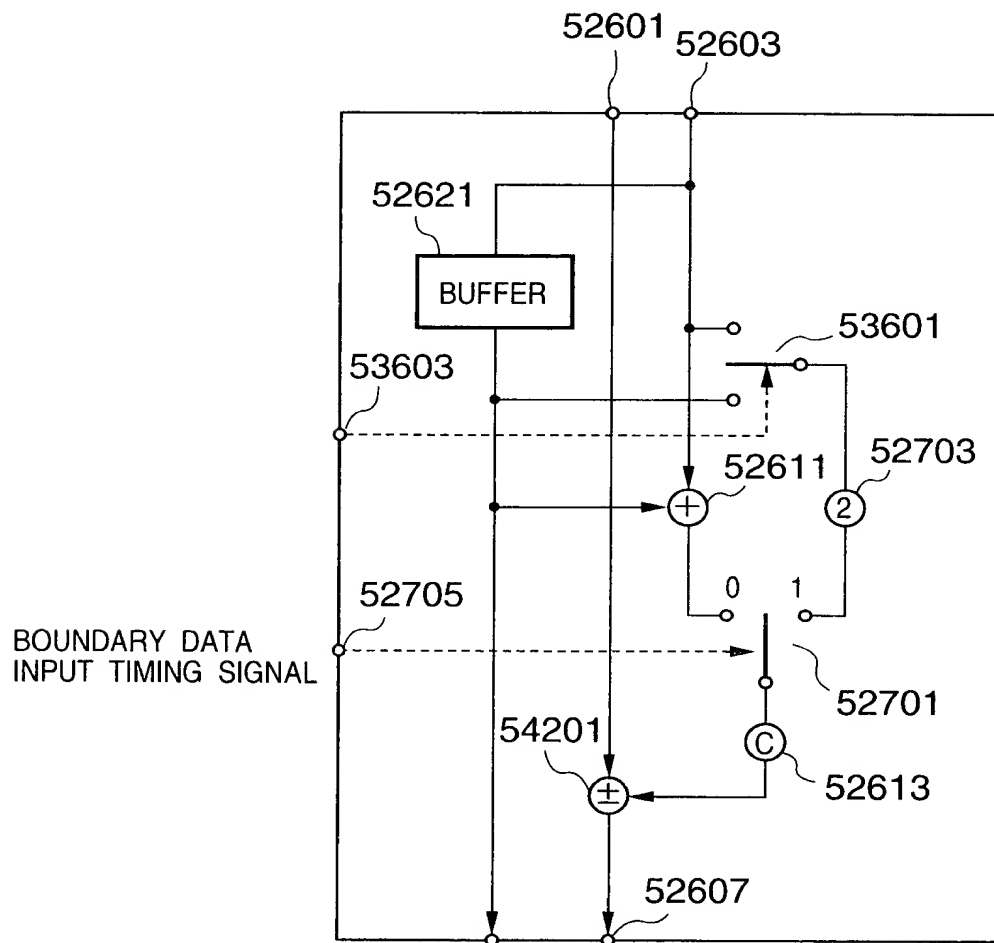
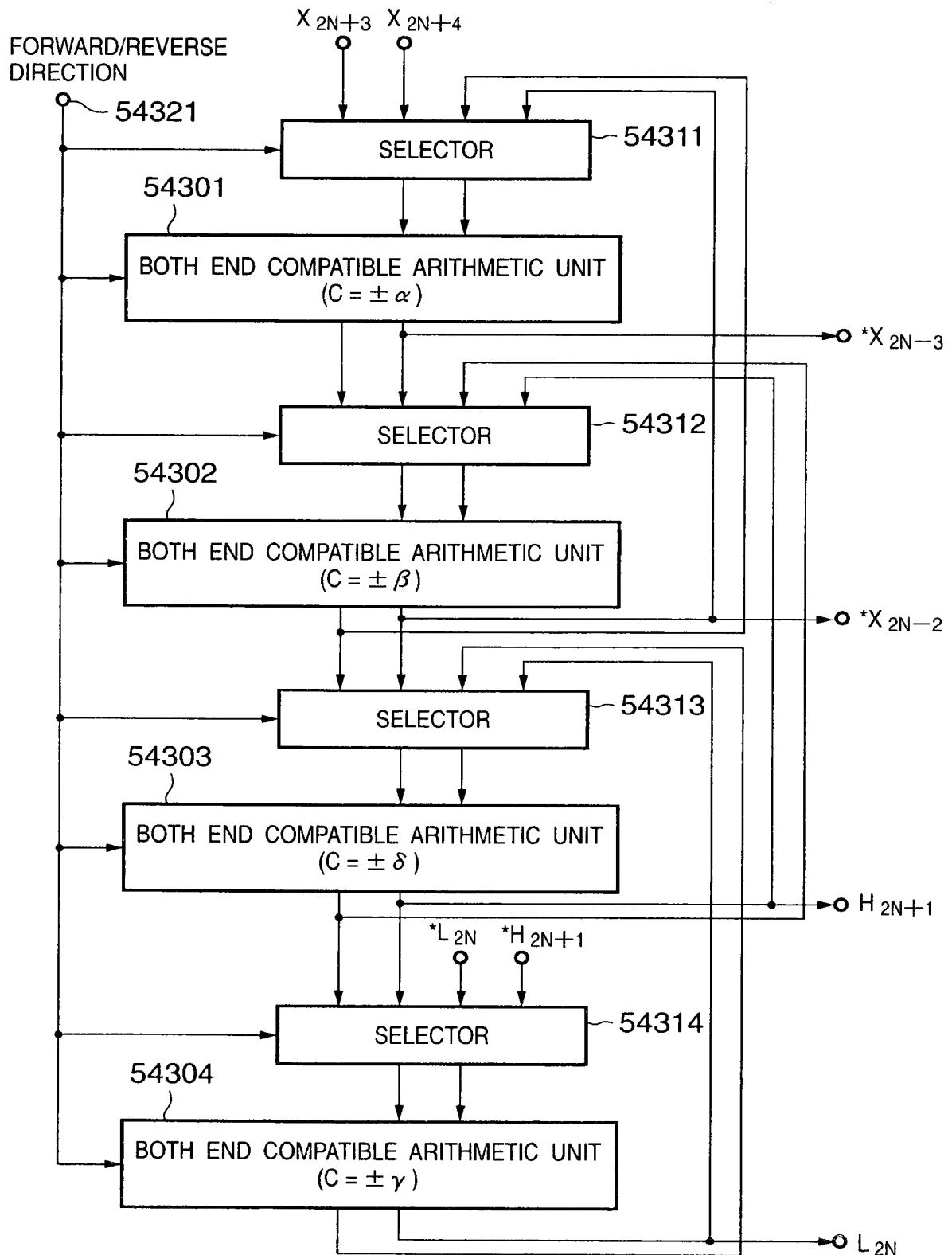
FIG. 70

FIG. 71



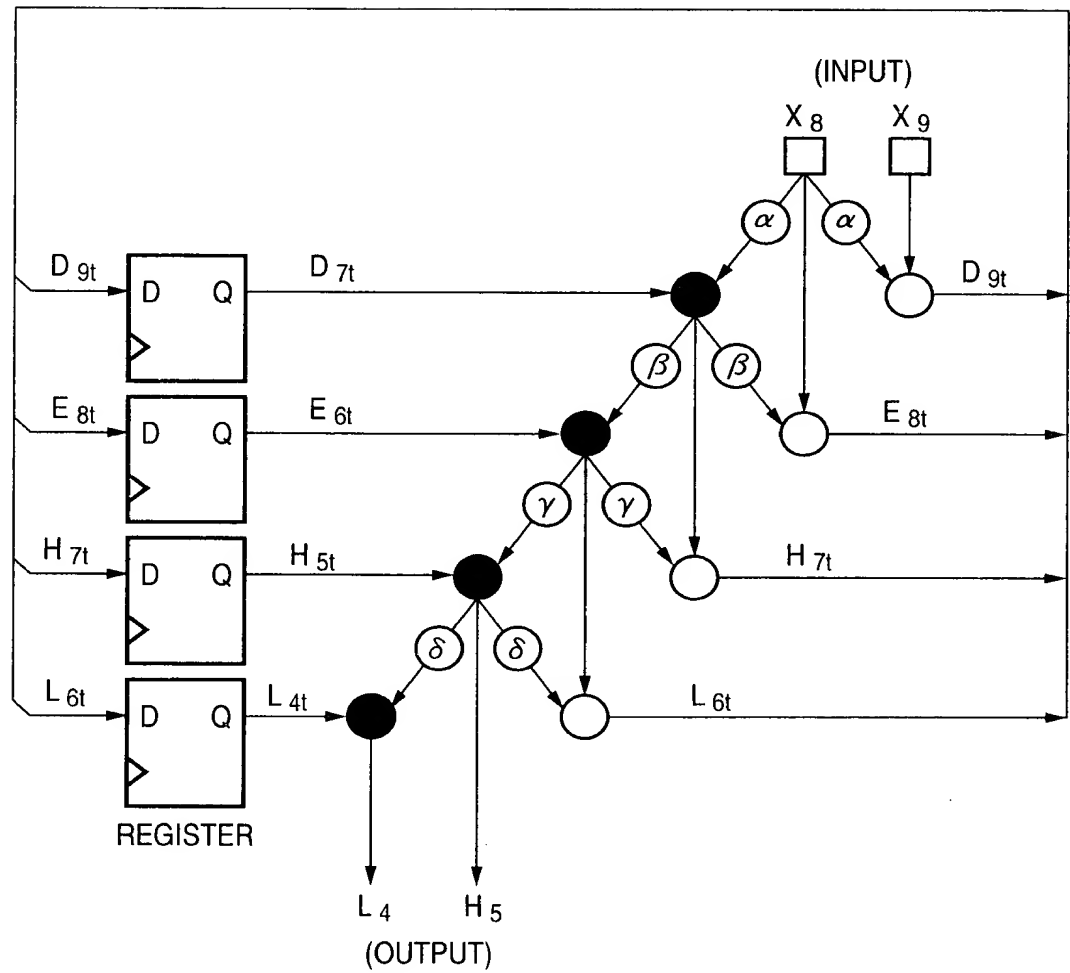
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FIG. 72



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FIG. 73



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FIG. 74

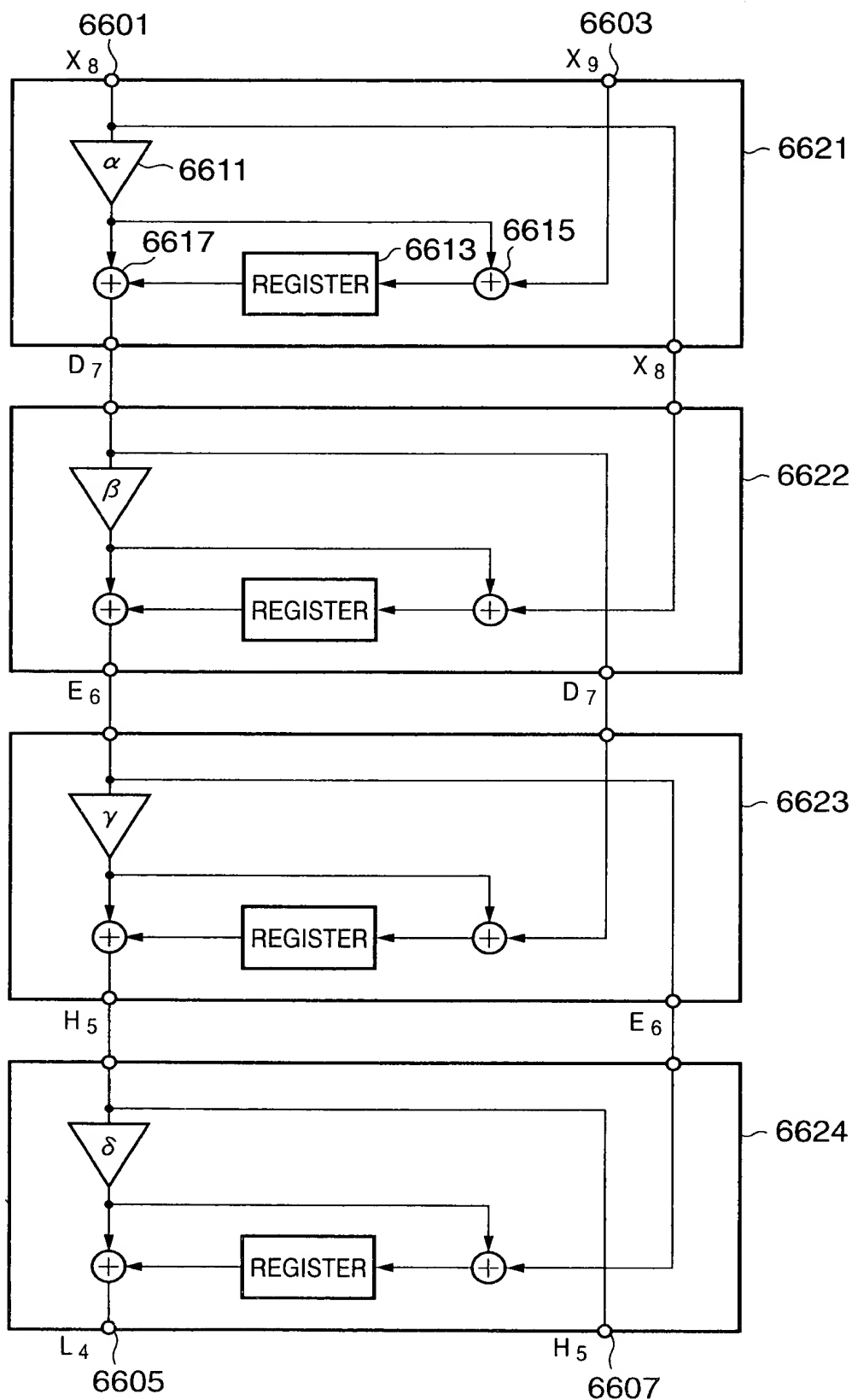
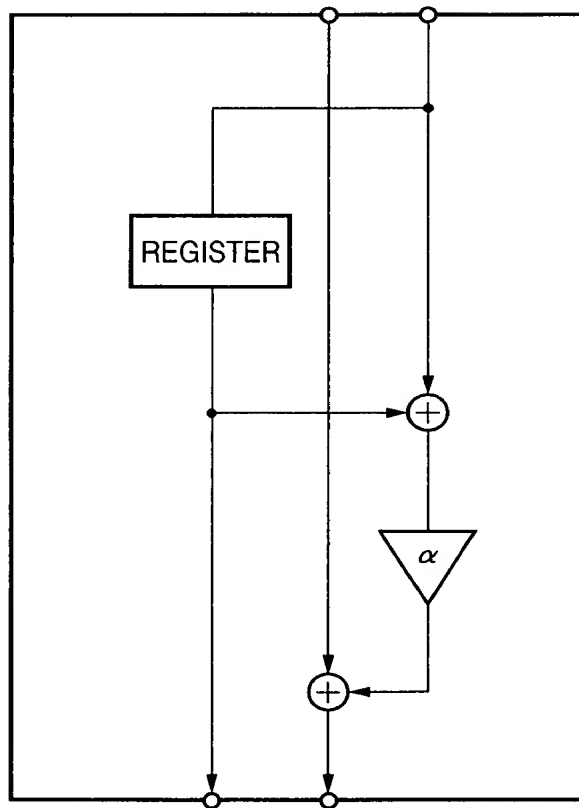


FIG. 75

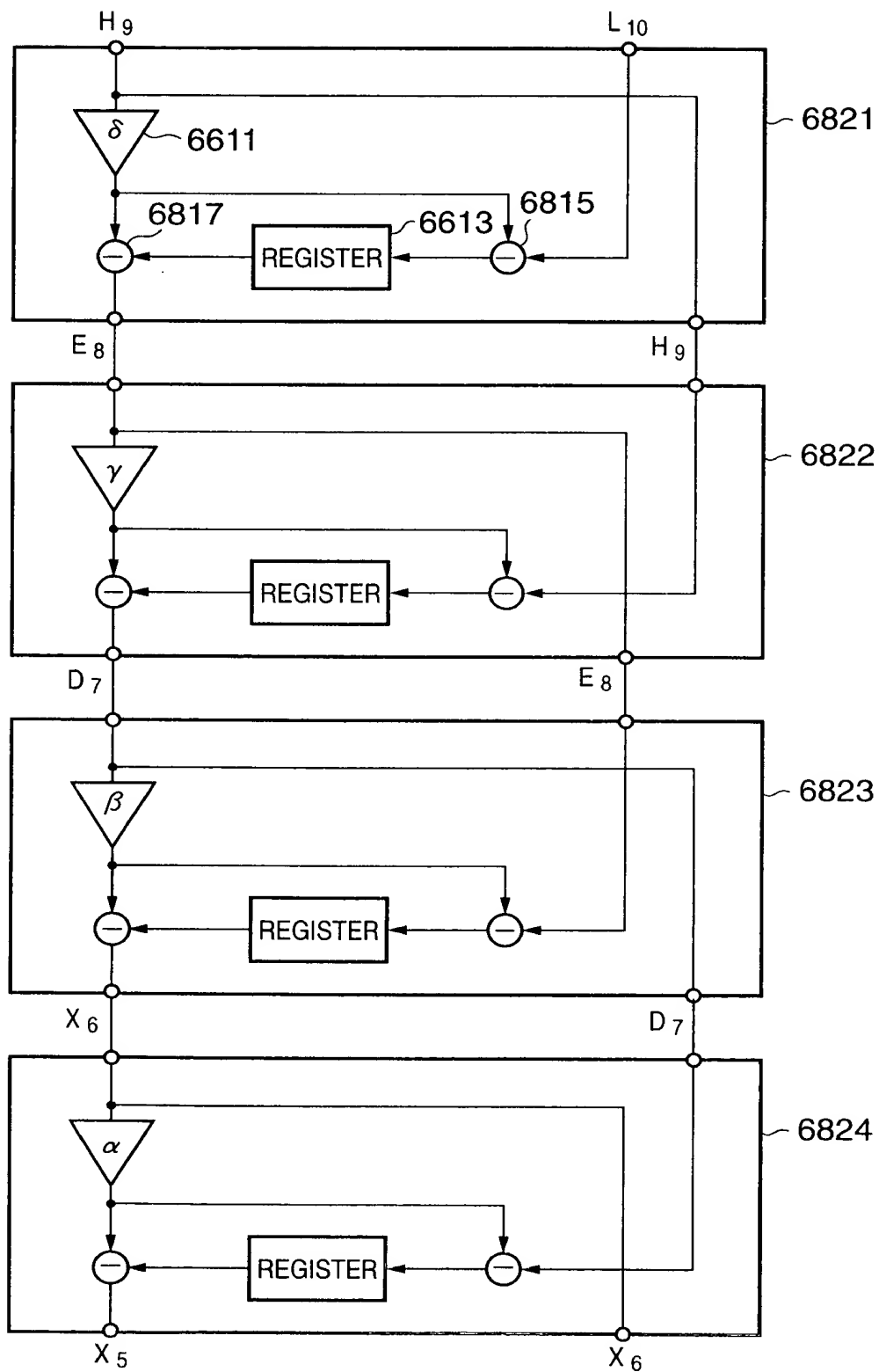


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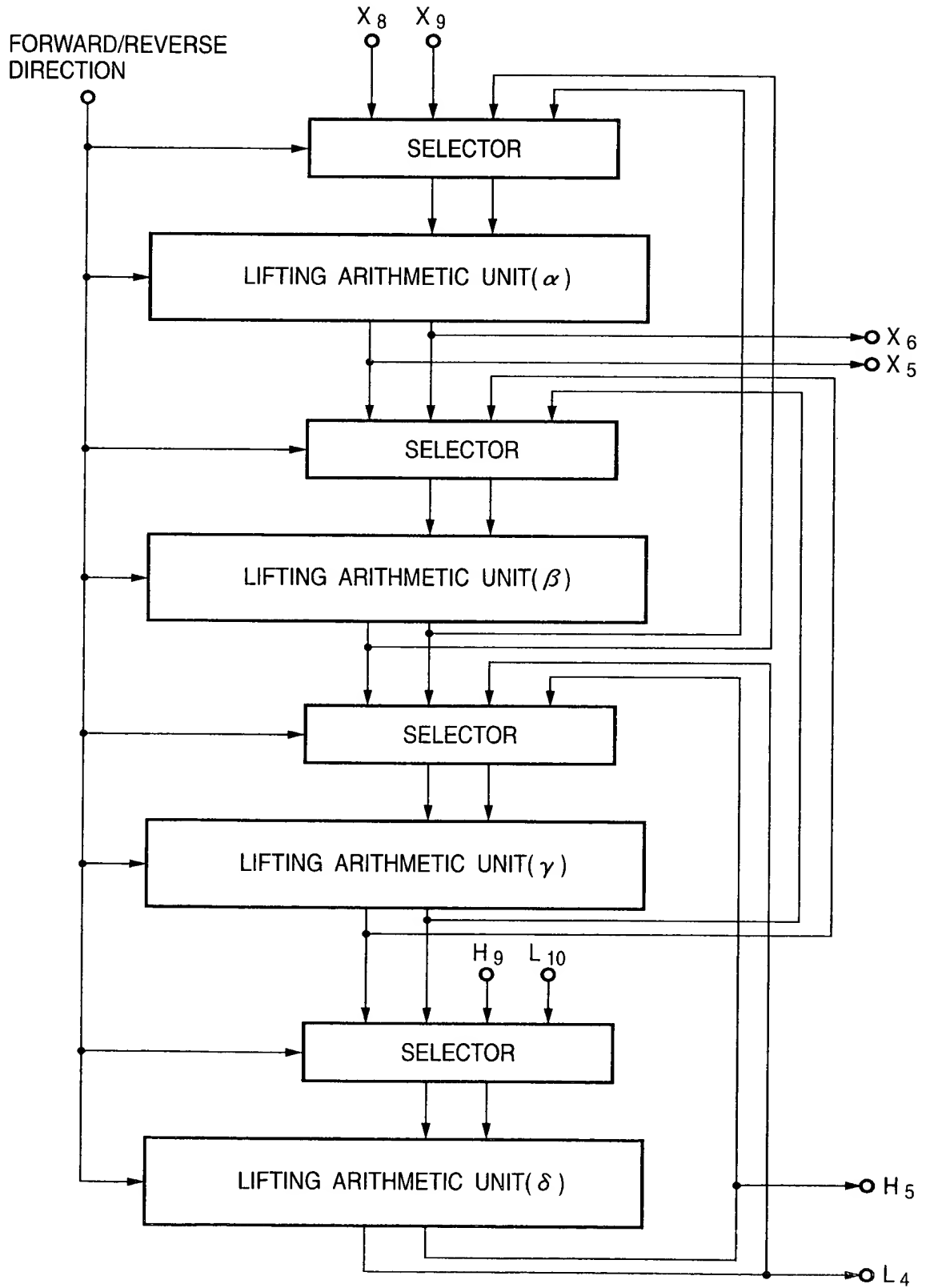
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FIG. 76



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FIG. 77



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FIG. 78

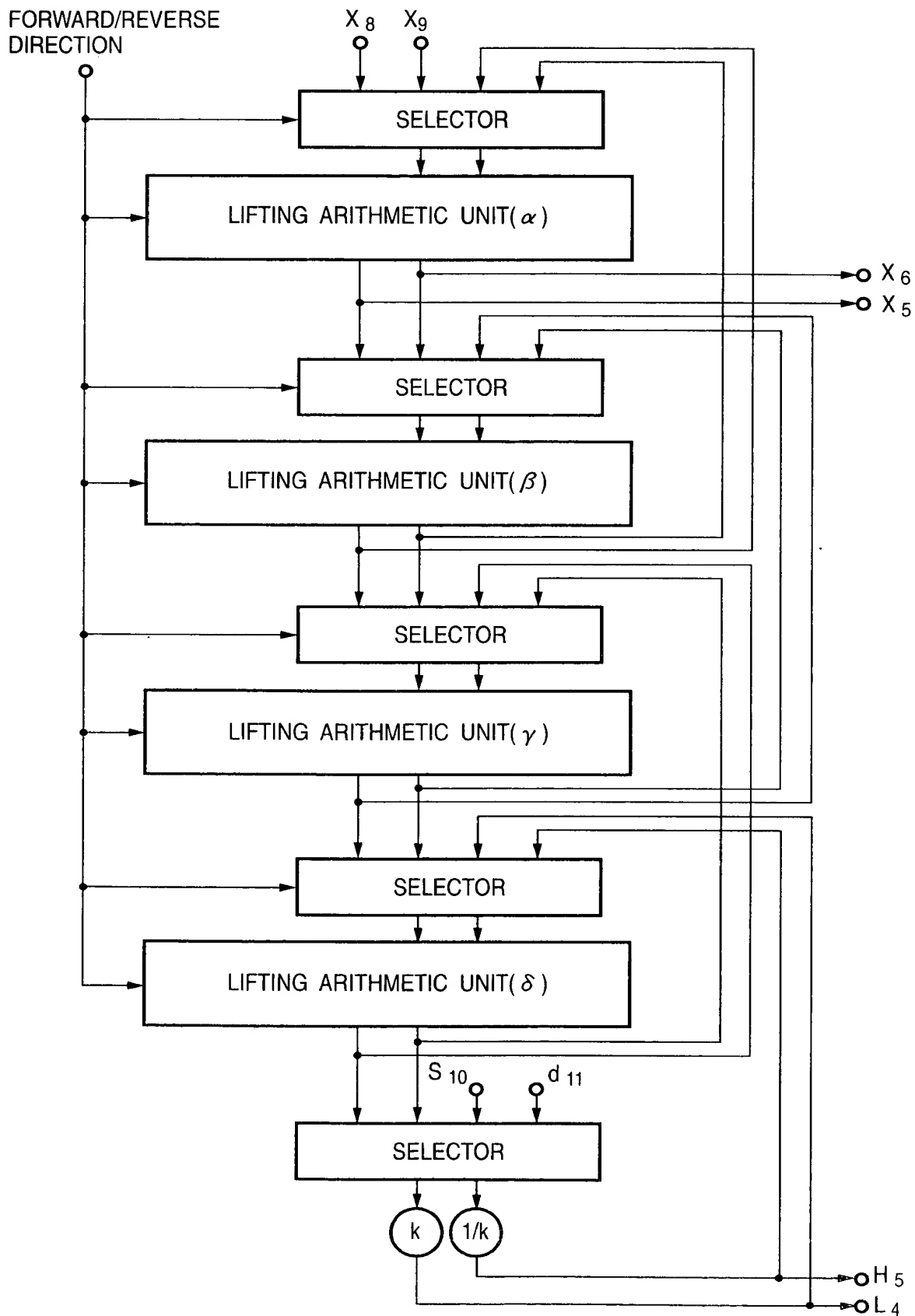
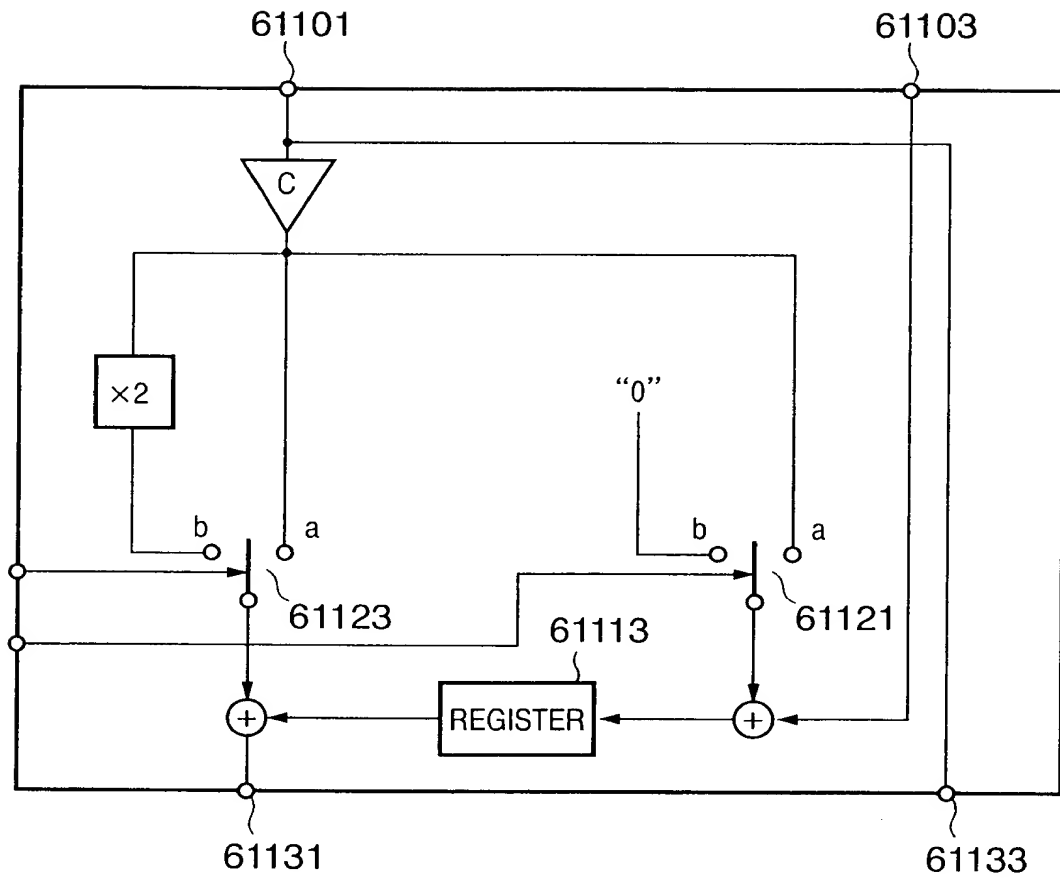
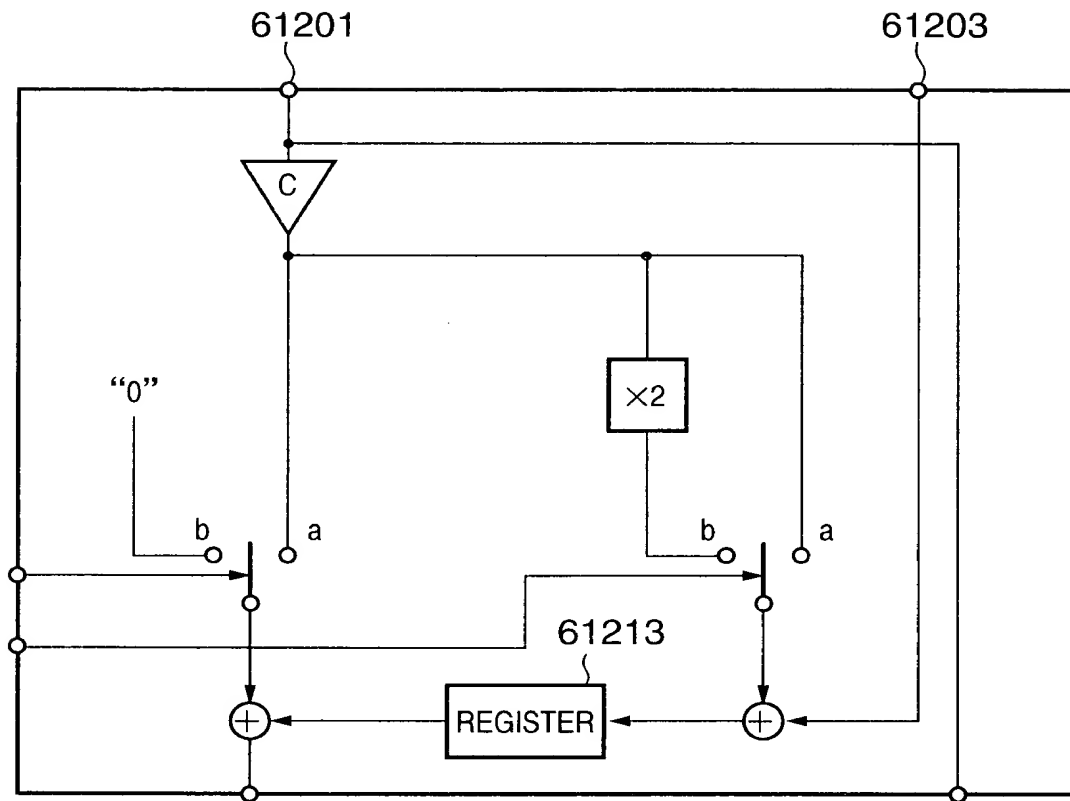


FIG. 79



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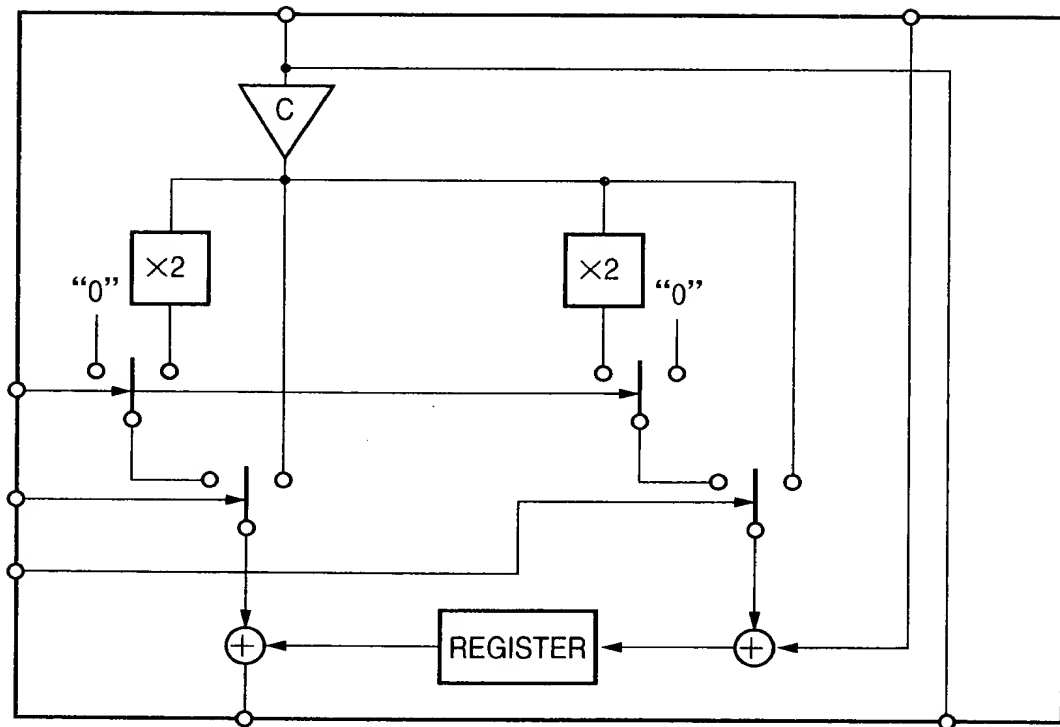
FIG. 80



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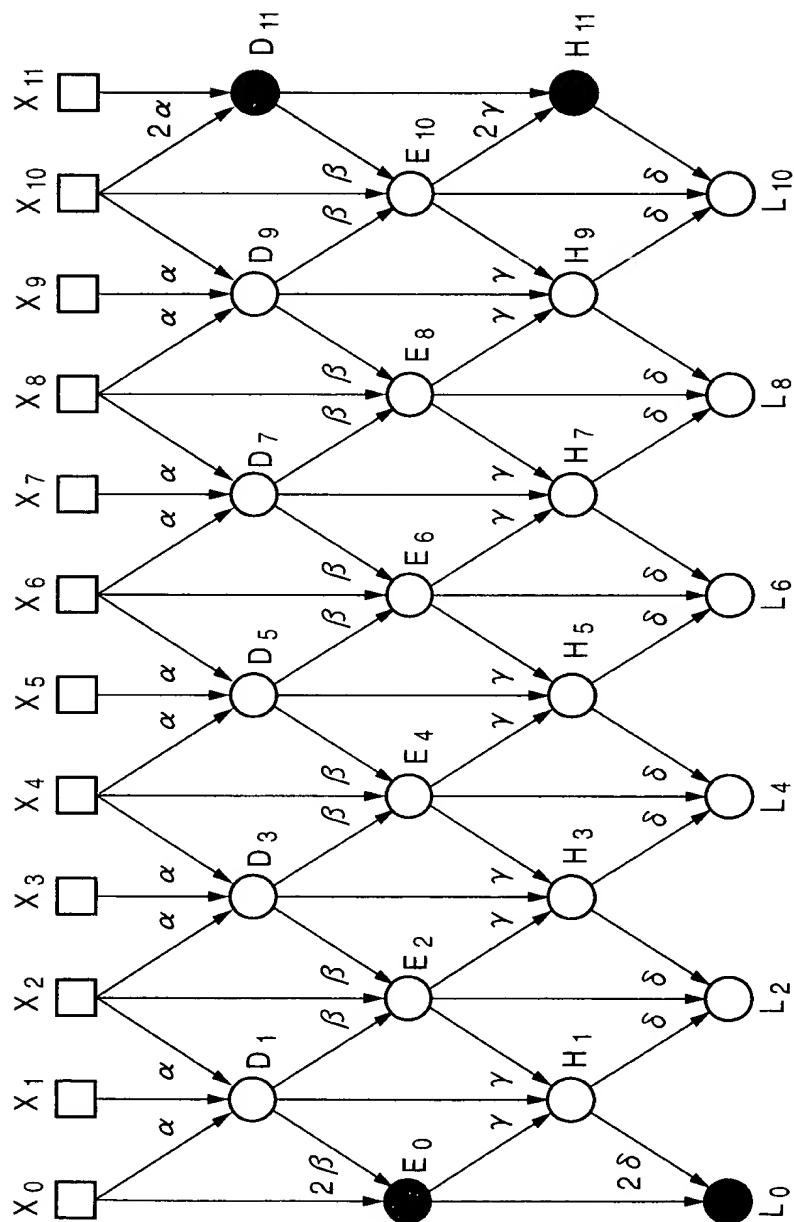
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FIG. 81



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FIG. 82



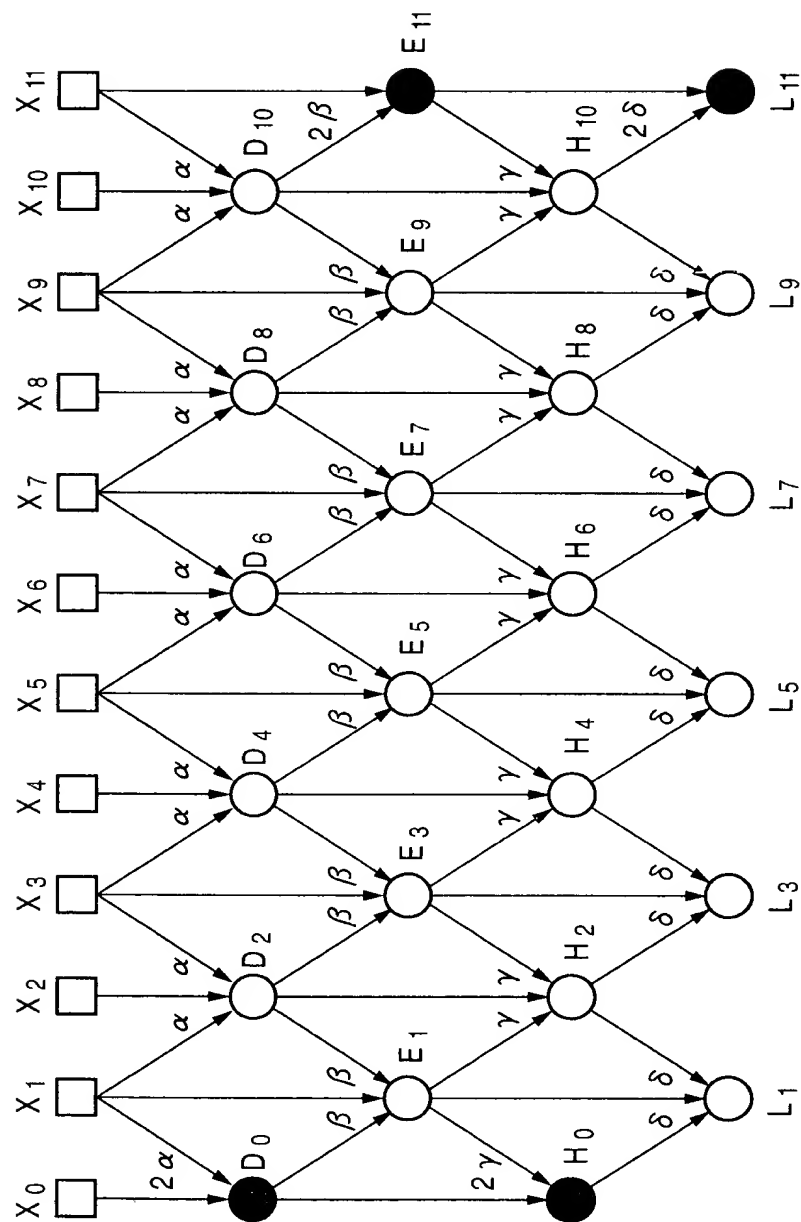
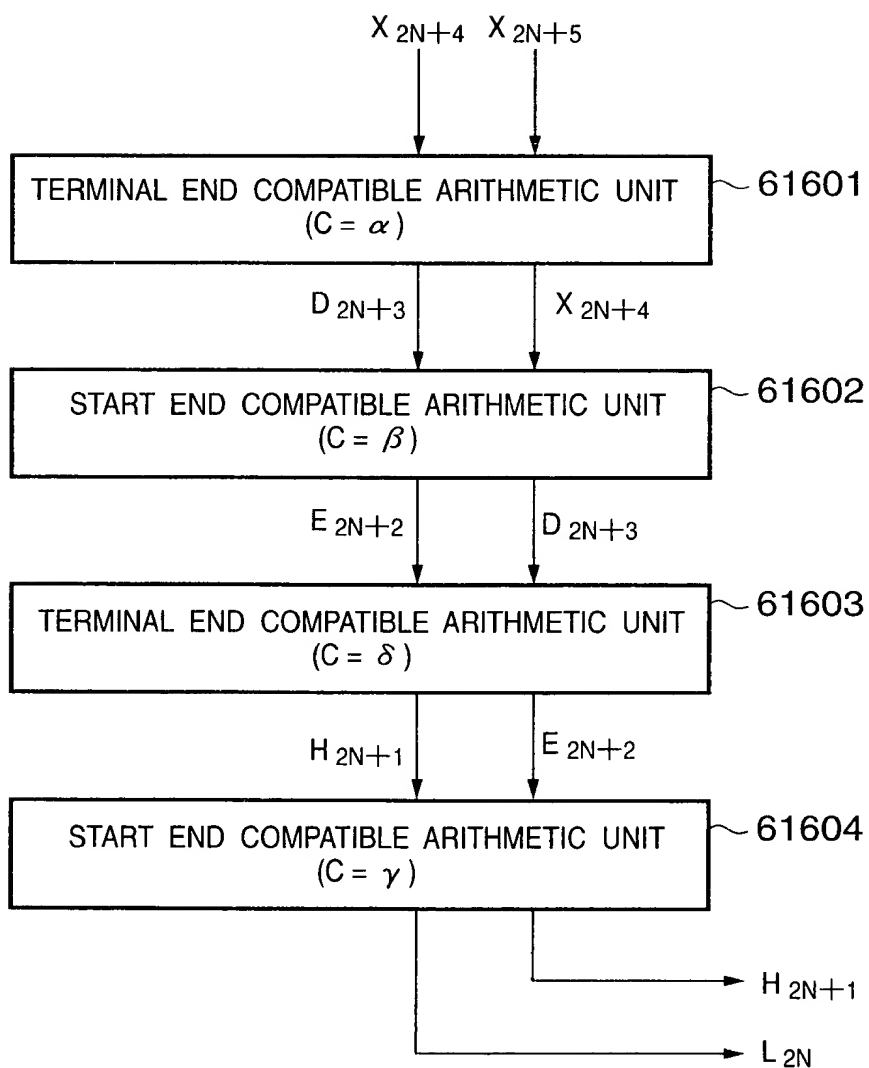
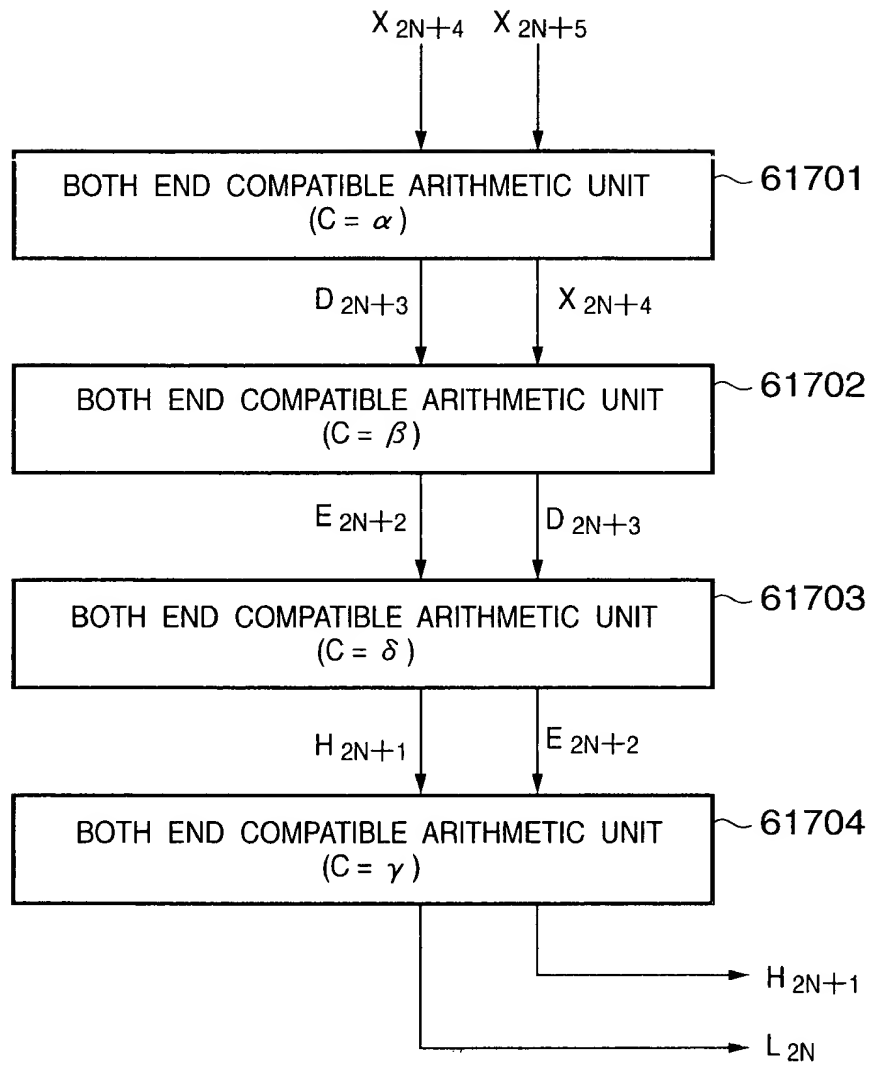


FIG. 84

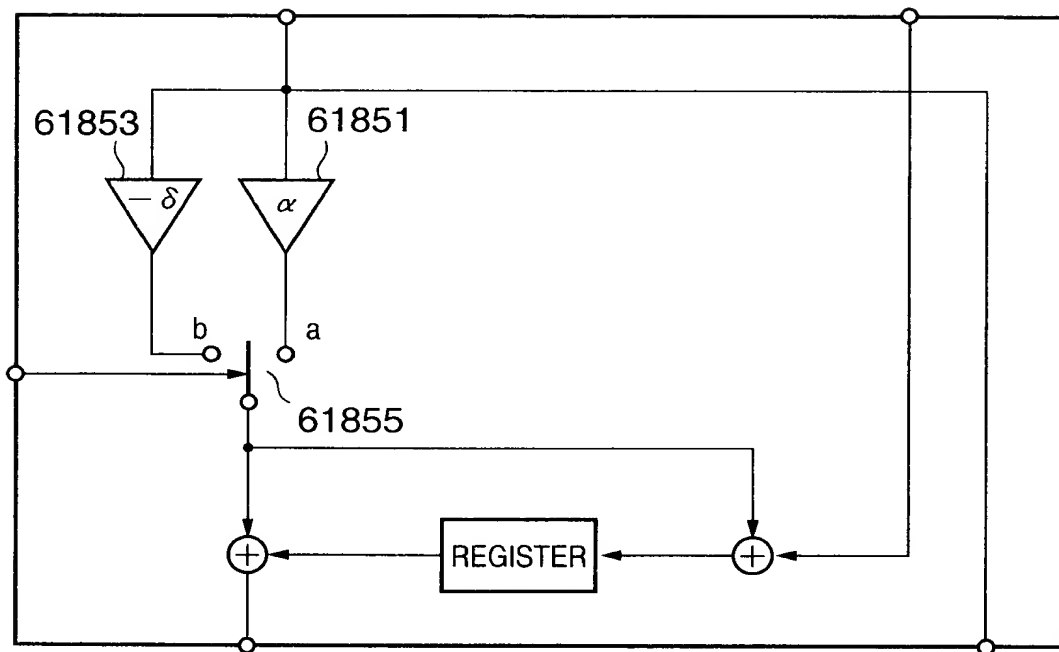


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FIG. 85

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FIG. 86



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FIG. 87

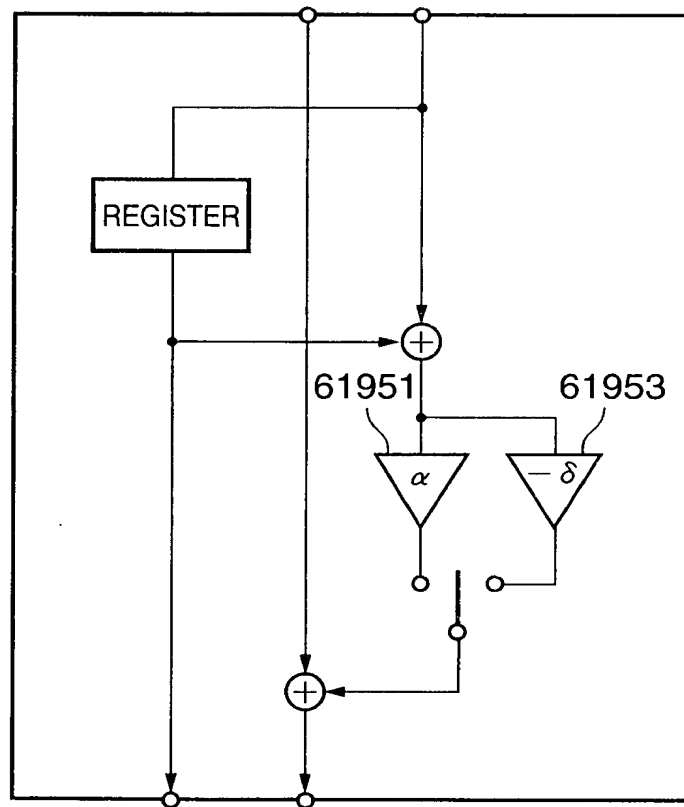


FIG. 88

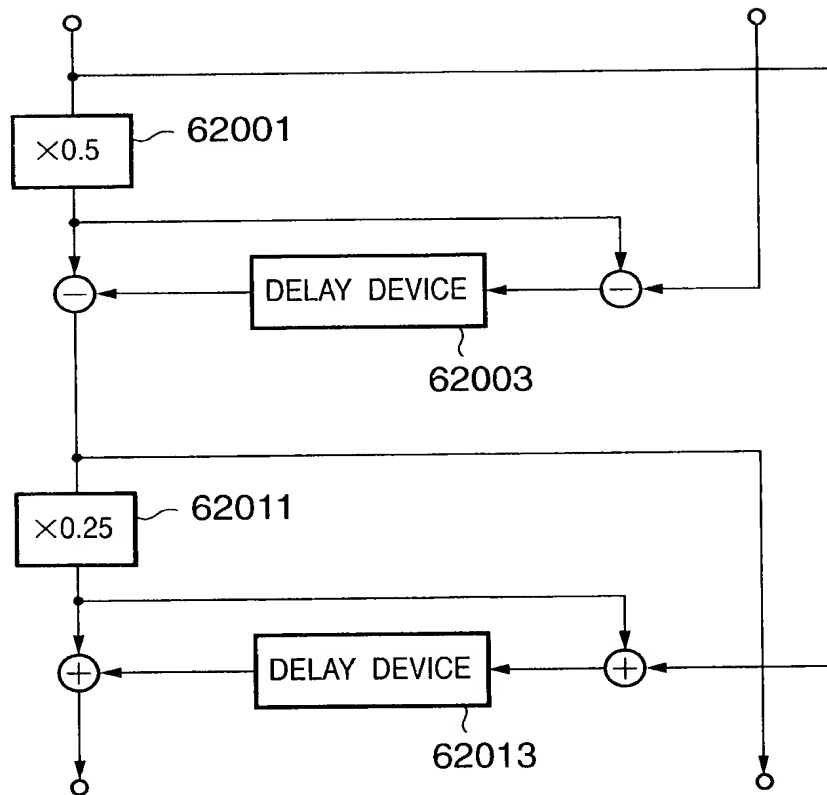


FIG. 89

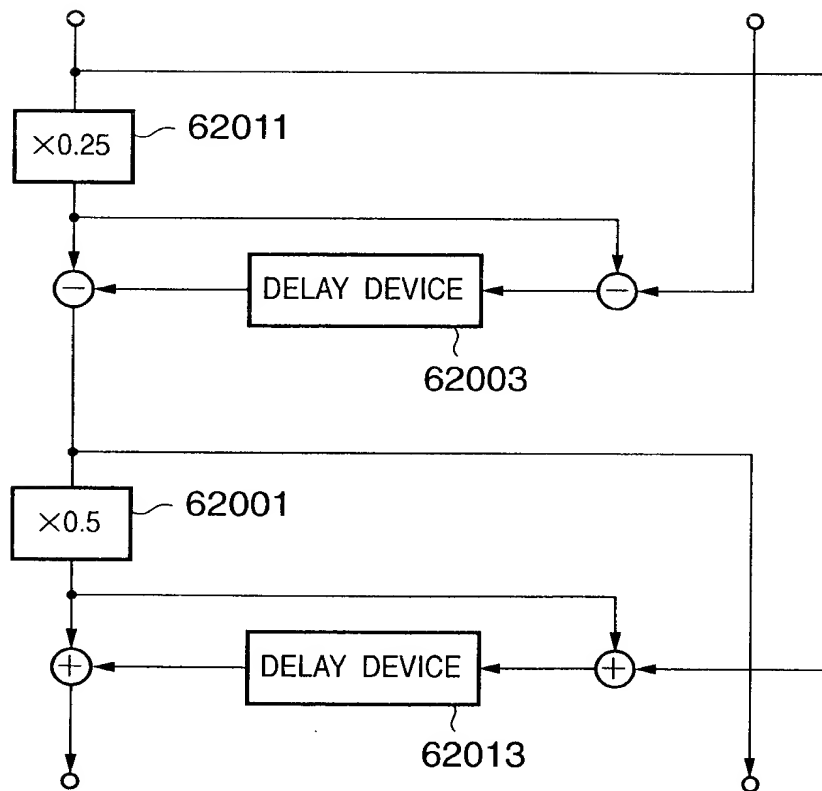


FIG. 90

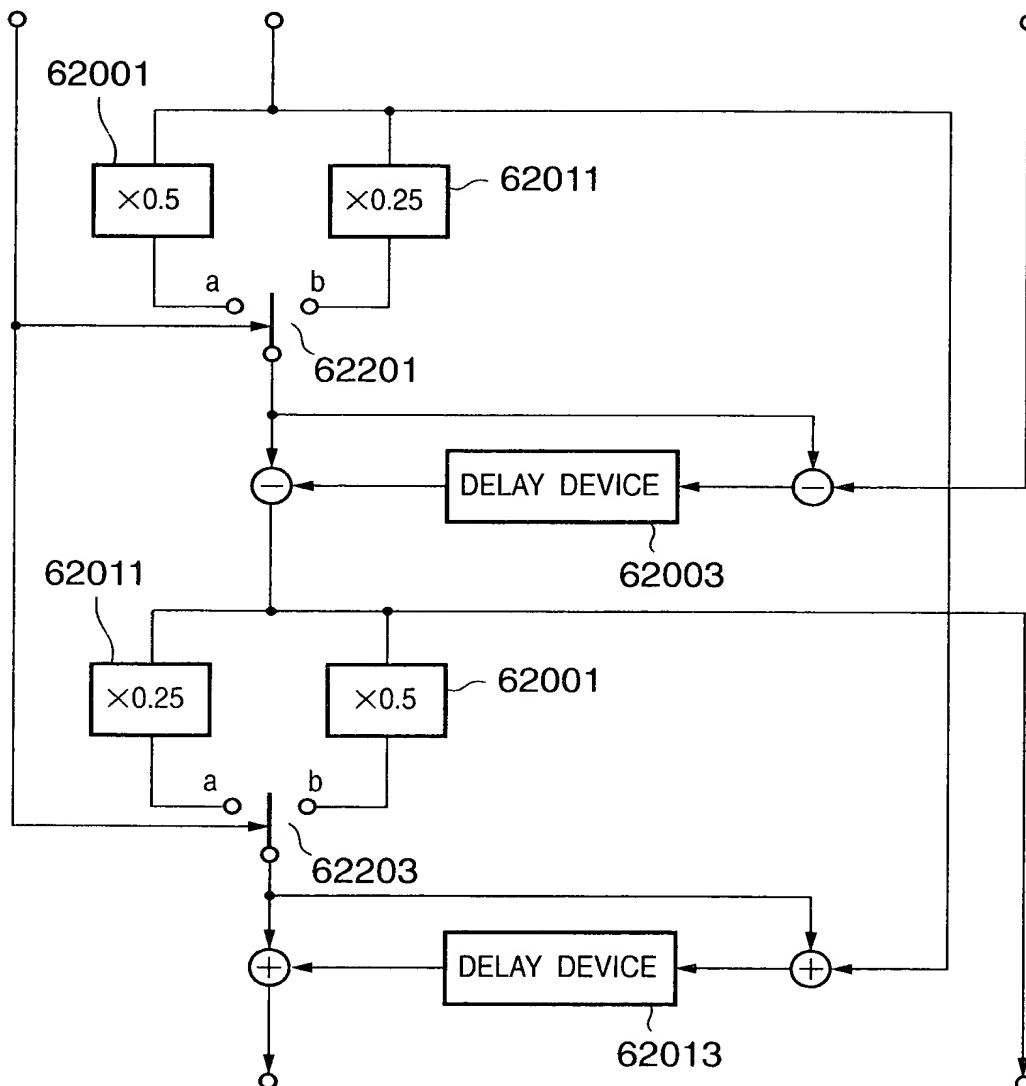
FORWARD/REVERSE
DIRECTION

FIG. 91

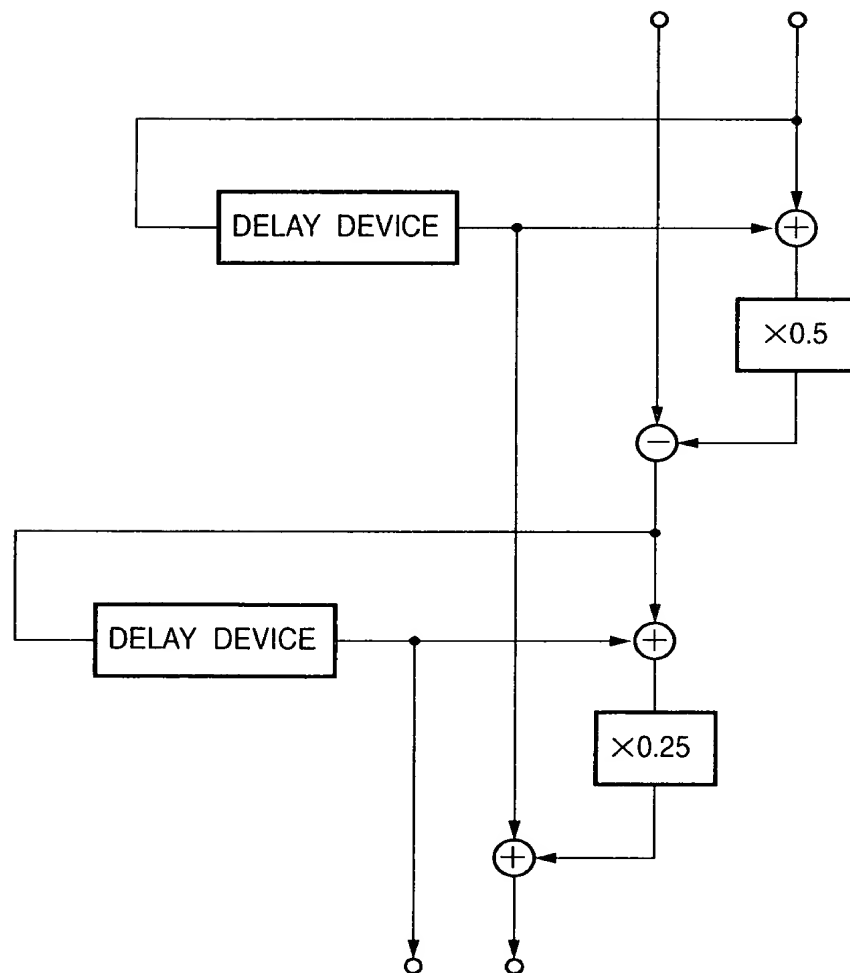
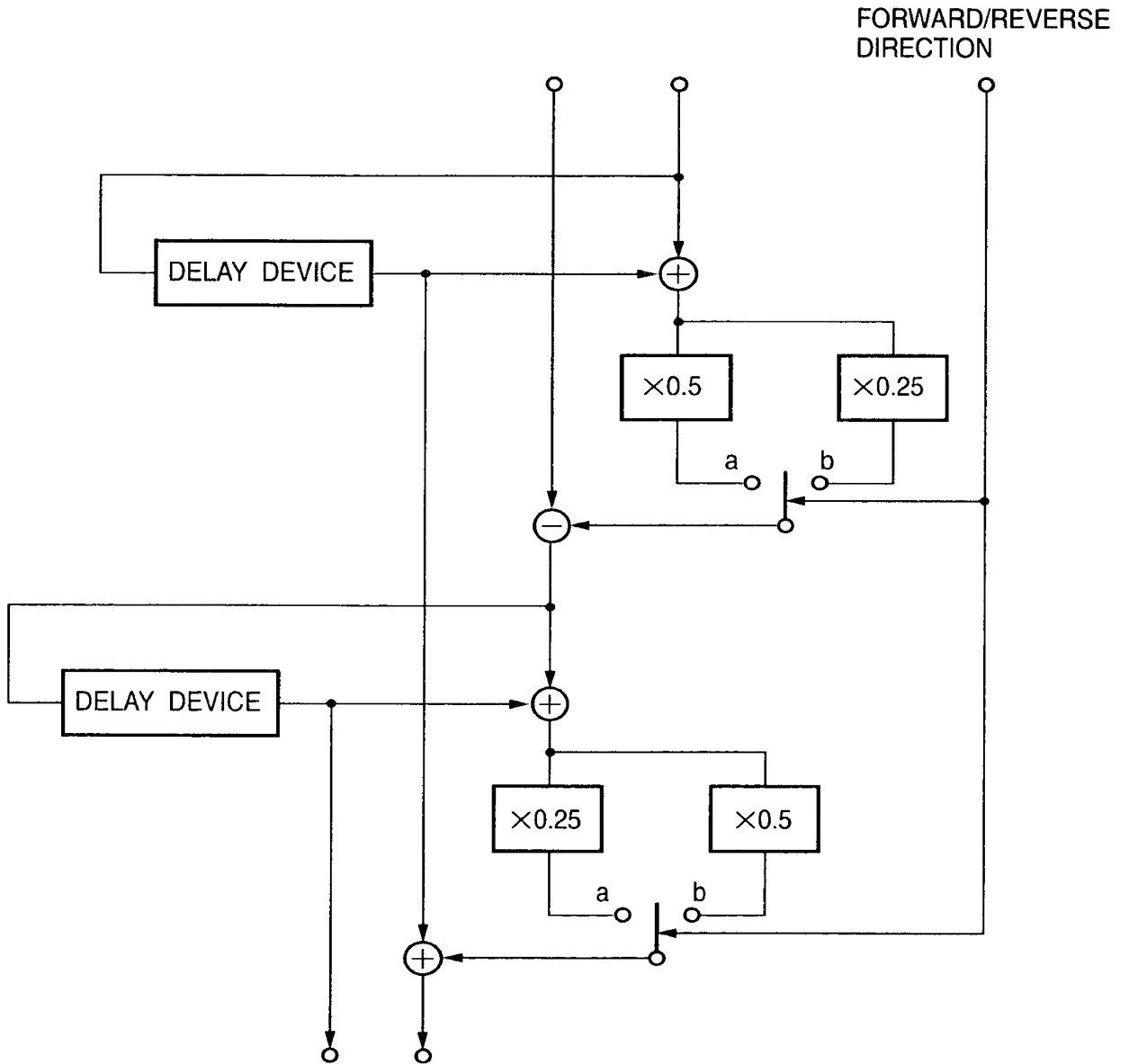


FIG. 92



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FORWARD/REVERSE
DIRECTION

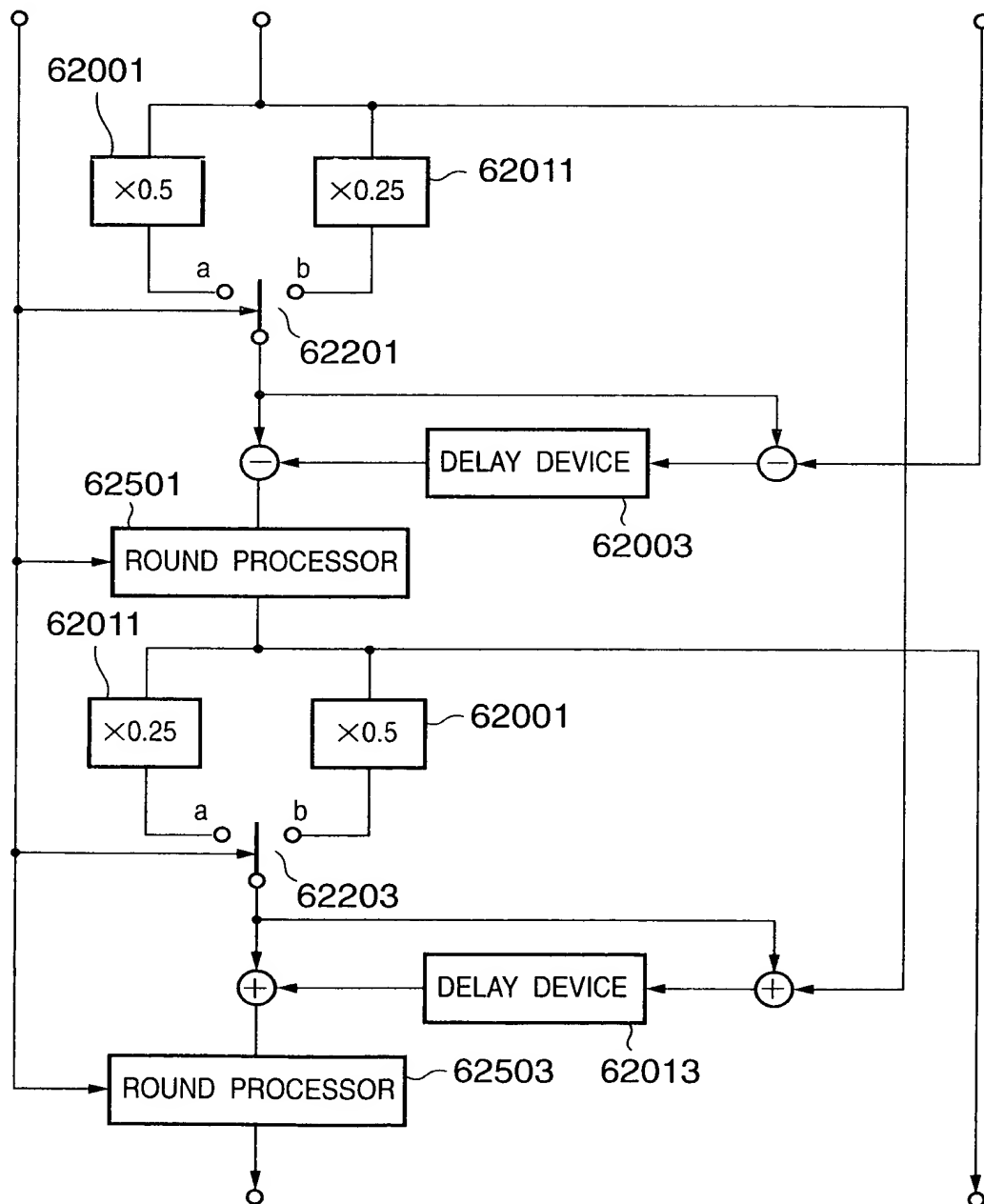


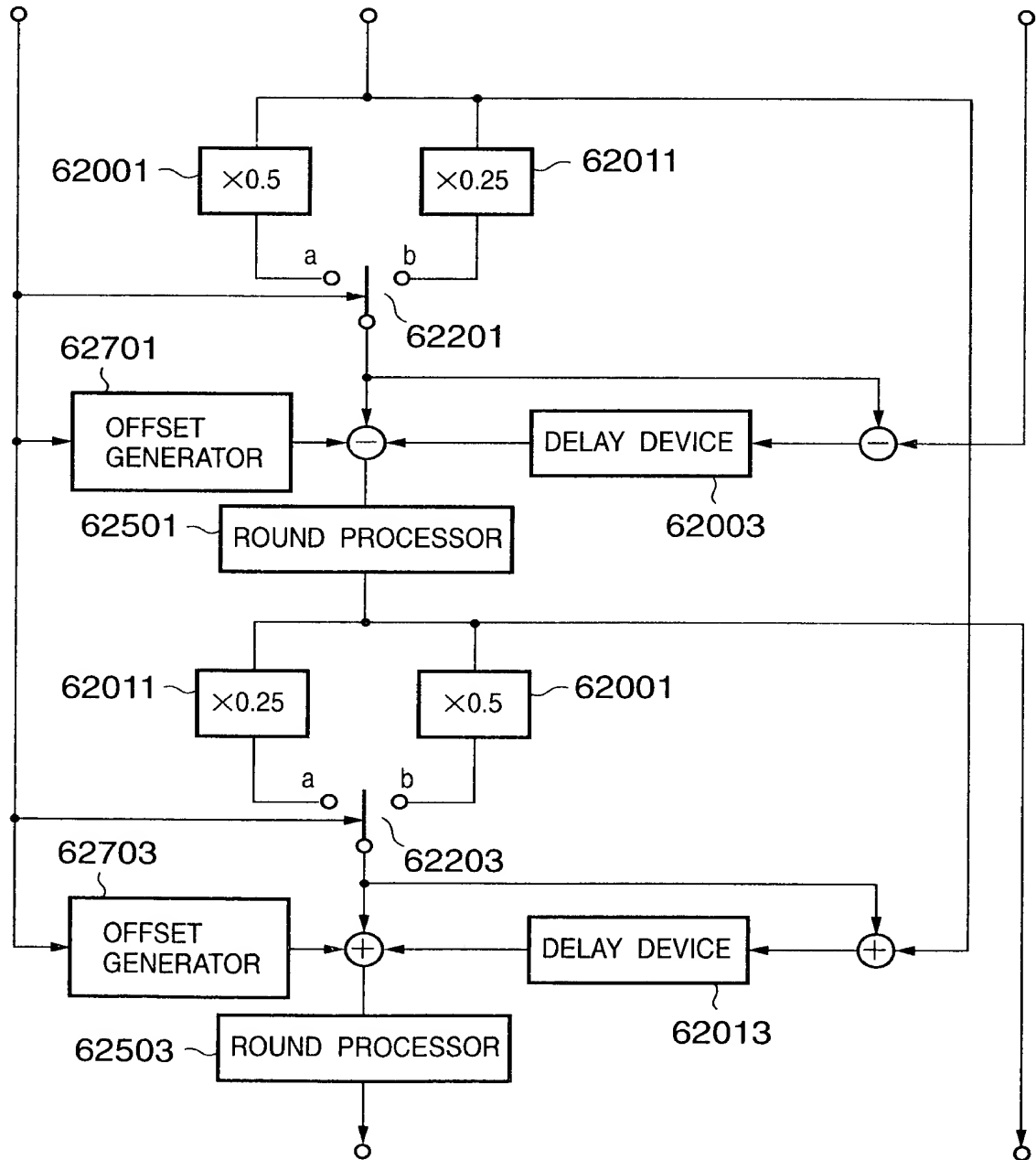
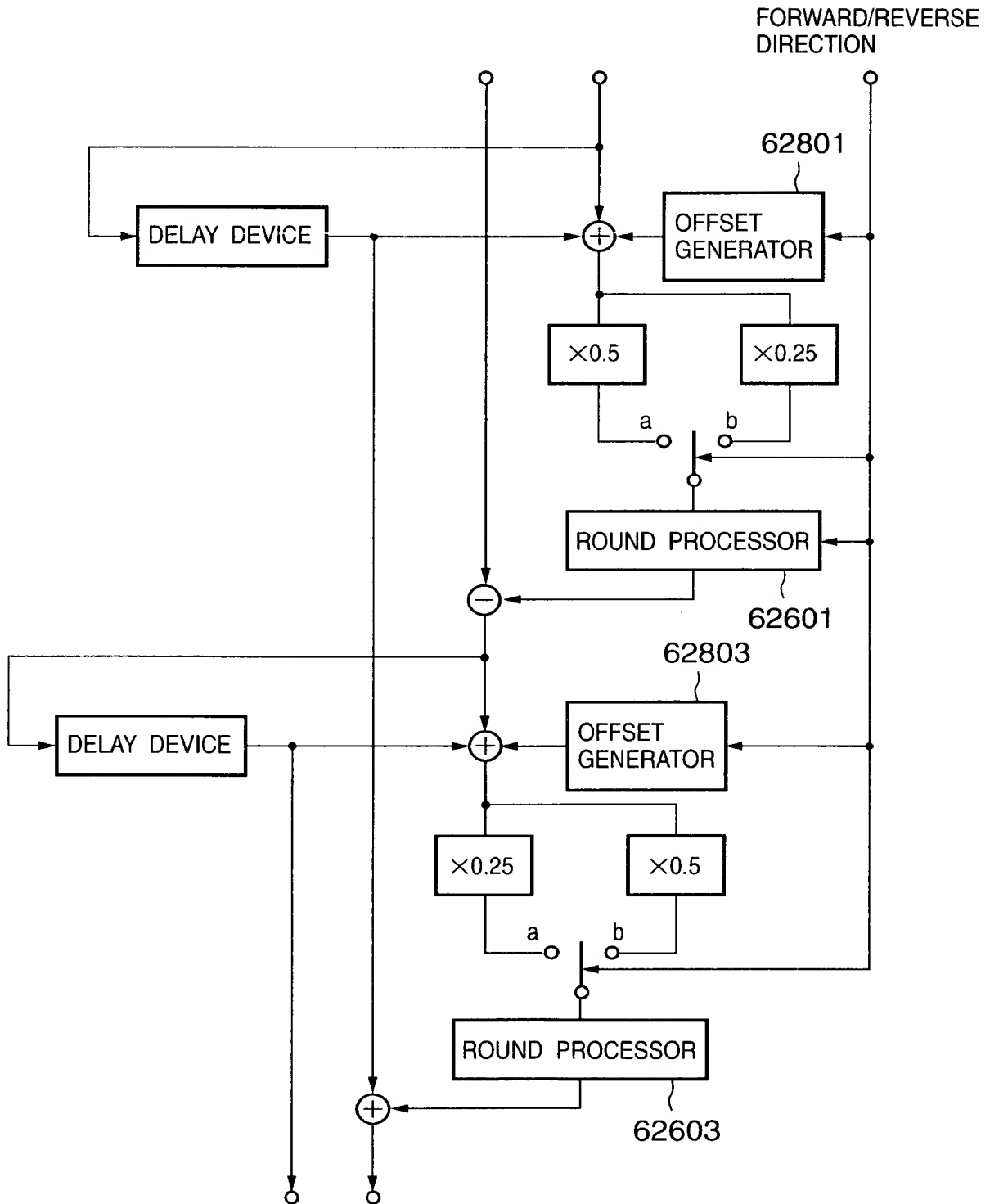
FIG. 95FORWARD/REVERSE
DIRECTION

FIG. 96



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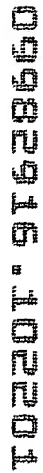
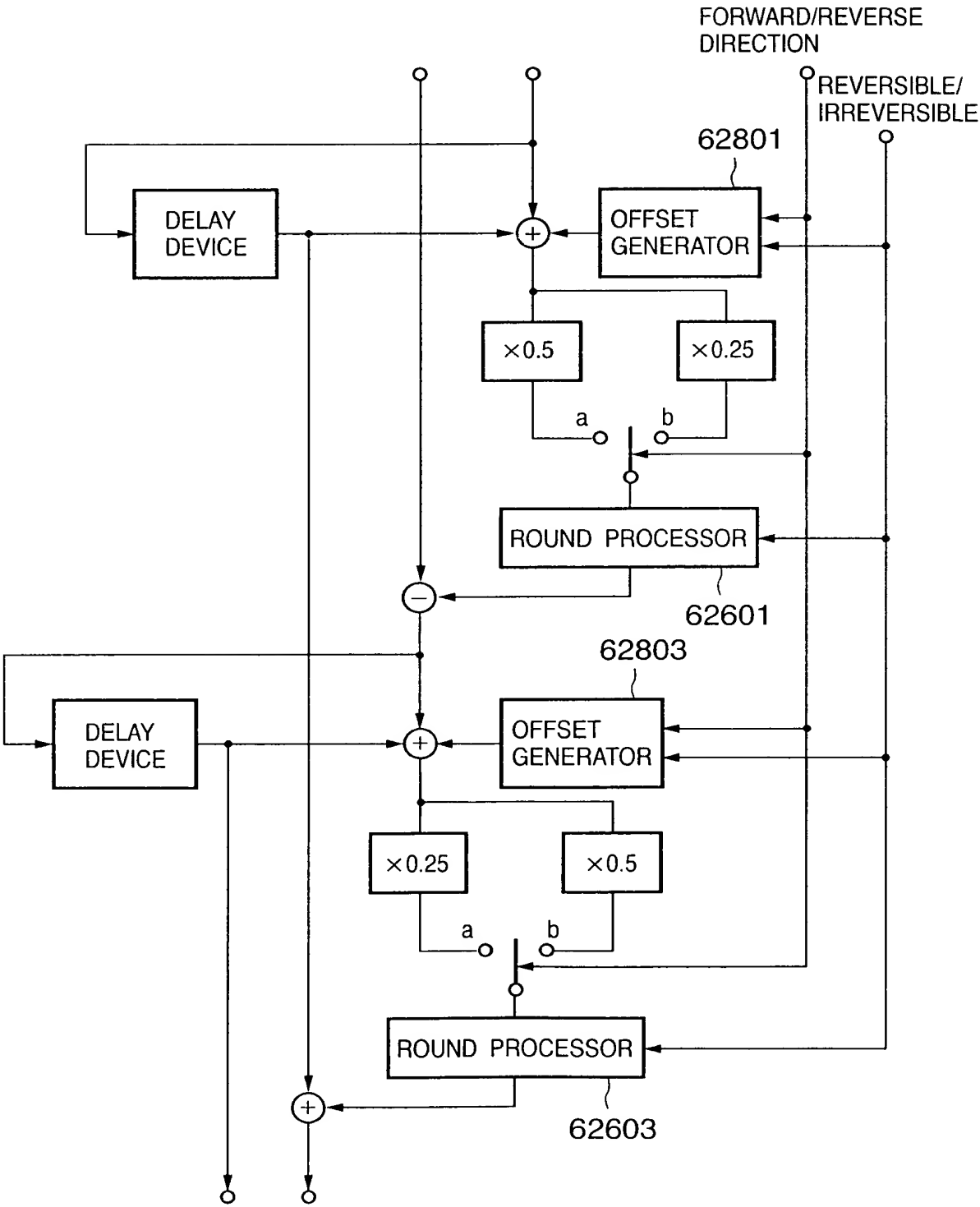


FIG. 98



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FIG. 99

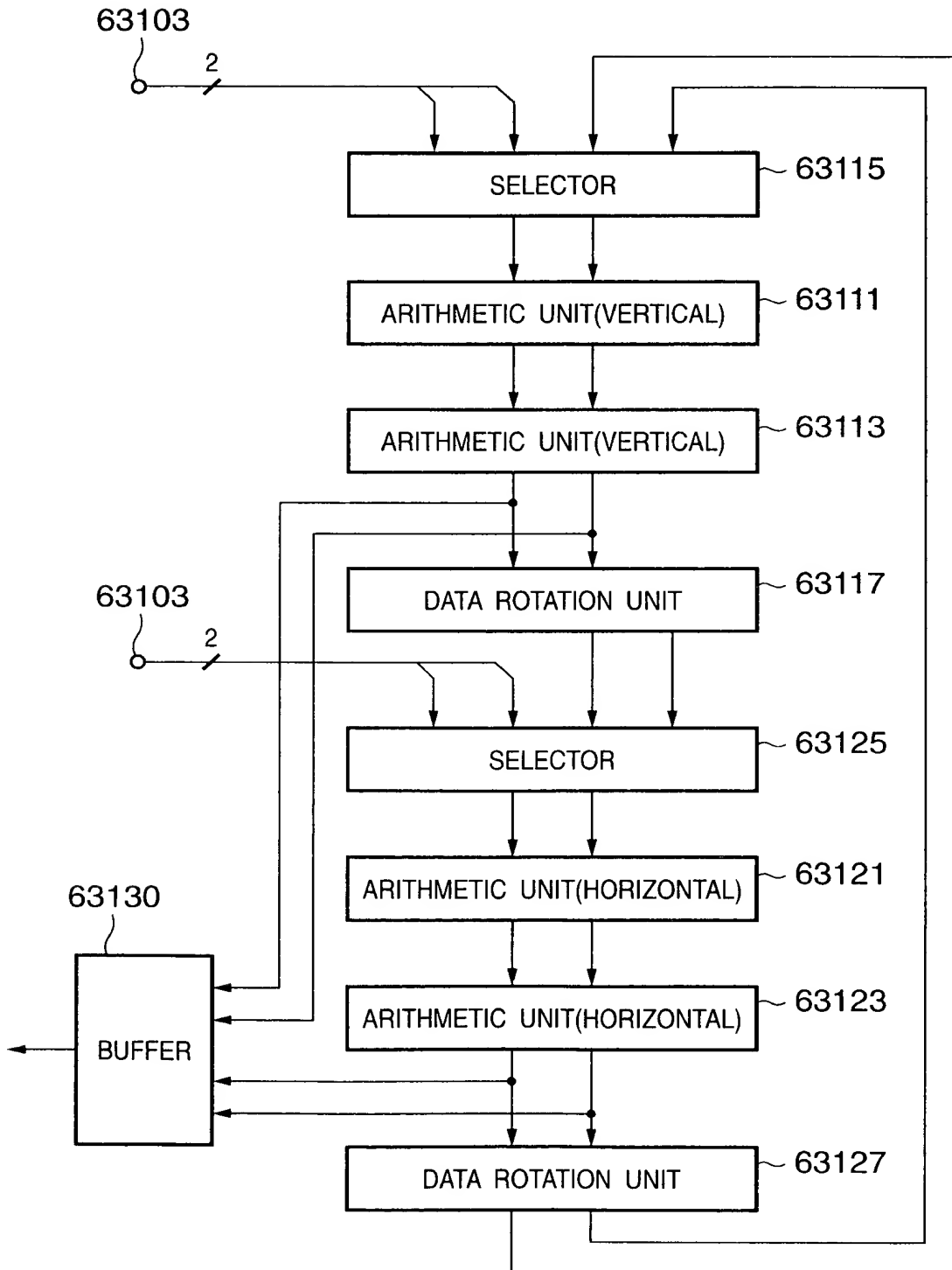


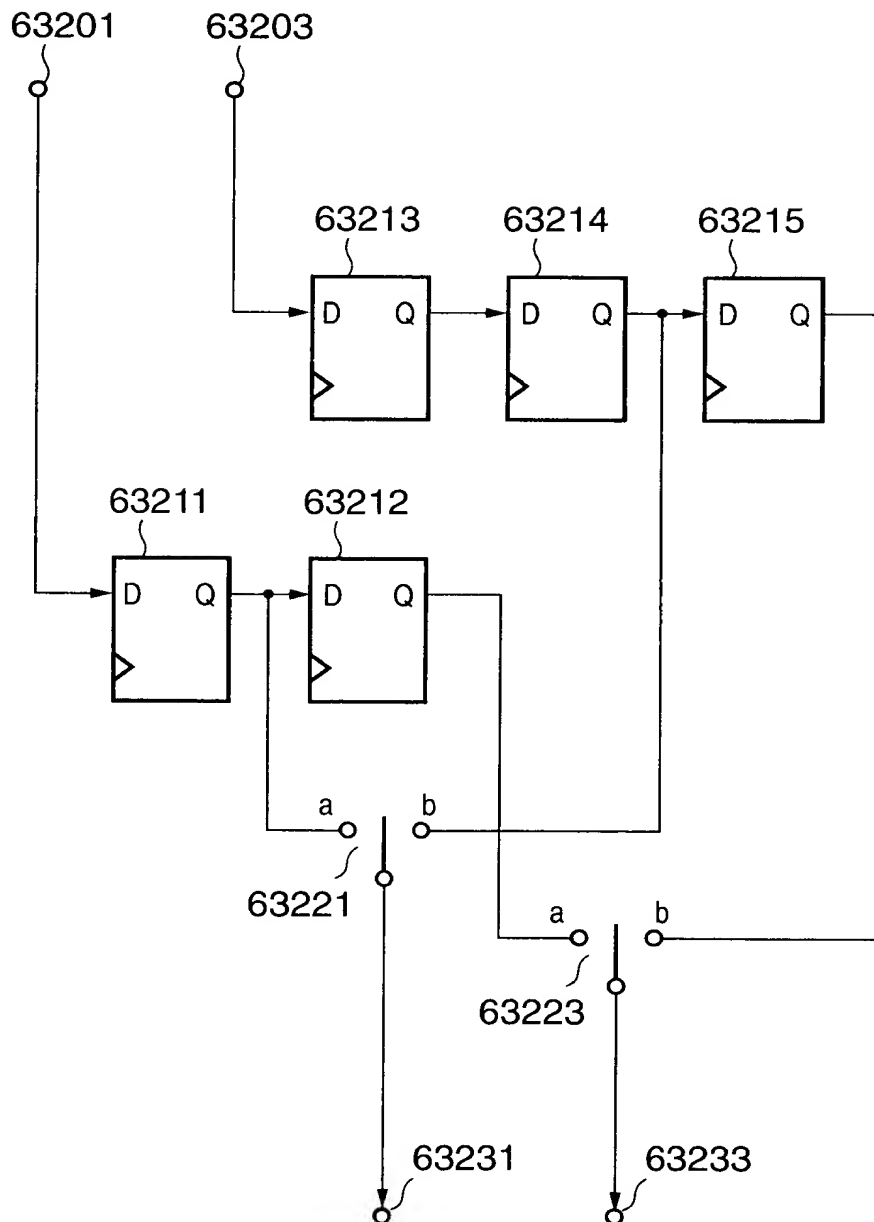
FIG. 100

FIG. 101